



Wired / Wireless / PoE CMOS IP Camera

ICA-107

ICA-107W

ICA-107P

User's Manual

Version: 1.00

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
4. Consult the dealer or an experienced radio technician for help

FCC Caution

To assure continued compliance. (example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE)

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8,2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Regulation



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual for PLANET Wired / Wireless / PoE CMOS IP Camera

Model: ICA-107 / ICA-107W / ICA-107P

Rev: 1.0 (July. 2007)

Part No. EM-ICA-107_W_P

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1. Introduction

Searching for a powerful and economical Internet Camera? PLANET is glad to introduce our ICA-107 / ICA-107W / ICA-107P. Those Internet Cameras Integrated a microcomputer and a high quality CMOS digital-Image-Sensor, enabling it to display high quality live streaming video over your LAN and the Internet.

The motion detection of the ICA-107 series can notify users via email or ftp when detecting any movement. With its admin software, no expertise required, your first surveillance network can be easily, efficiently established in few minutes.

ICA-107W support 802.11b/g wireless network, that will save your time and cost for wiring. And ICA-107P has provided IEEE802.3af standard PoE interface, it helps you to locate the camera to any location that is no power outlet. With the Windows based utility, IP Camera Viewer, the ICA-107 series could take a snapshot, record and playback the video files. Also with a powerful central manage system – Cam Viewer Lite, it can help you to manage all the PLANET internet cameras in the same software, not just ICA-107 serial.

In the following section, unless specified, the term “IP Camera” will mean all the cameras above. For Cam Viewer Lite, you may check the manual in Cam Viewer Lite CD disk for the details.

2. Package Content

- Internet Camera
- Power Adapter
- Camera Stand Kit
- Category 5 Ethernet Cable
- Quick Installation Guide
- CD-Rom
- External Antenna (ICA-107W only)

If any of the above items are missing, please contact your supplier.

3. System Requirement

Model	ICA-107	ICA-107W	ICA-107P
Network Environment			
Network Access	10/ 100Base-TX Ethernet		
Additional Interface	-	IEEE 802.11b/g	IEEE 802.3af PoE
Monitoring System Recommendation			
System Hardware	<ul style="list-style-type: none"> • CPU: Pentium 4, 1.6GHz or above • Memory Size: 256 MB (512 MB Recommended) • VGA card resolution: 800 x 600 or above 		
Web Browser	<ul style="list-style-type: none"> • Internet Explorer 6.0 or above 		
System Requirement for IP Camera Admin & Viewer			
Support OS	Windows 2000 SP4, Windows XP SP2		
System Hardware	1 – 4 cameras surveillance application <ul style="list-style-type: none"> • CPU: Pentium 4, 2.0GHz or above • Memory Size: 256 MB or above. • VGA card resolution: 1024x768 or above 		

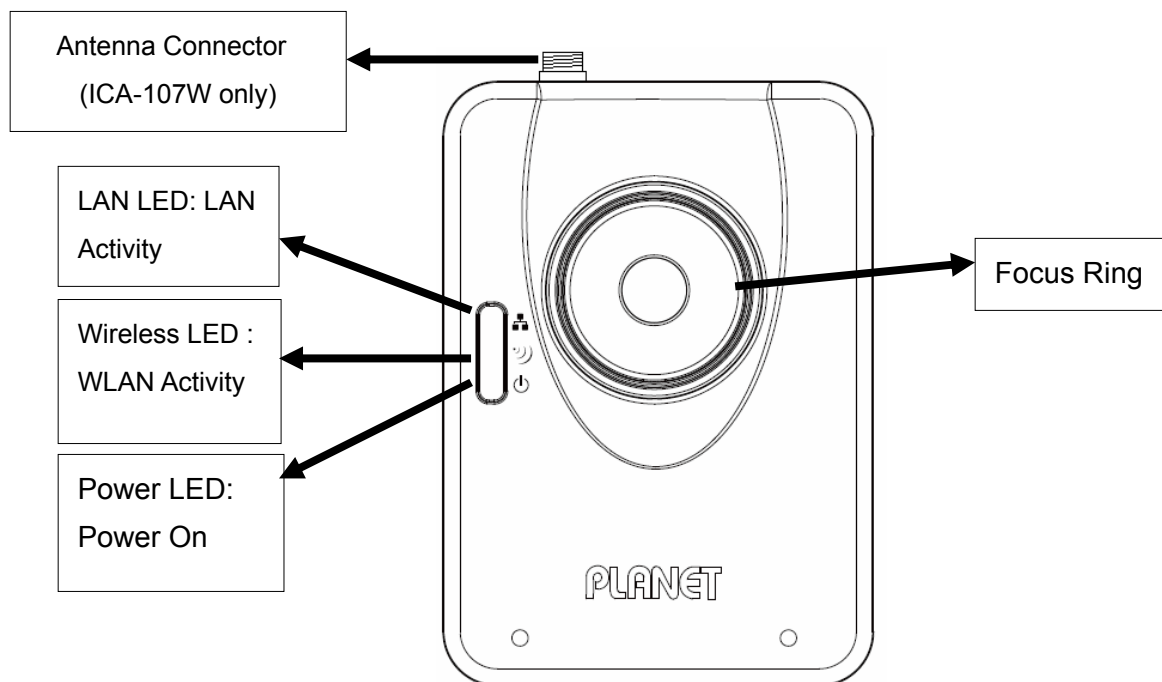
4. Hardware Installation

4.1. LED and Focusing

The IP Camera head and its focus ring allow you to modify the aim and focus of the IP Camera. To adjust the IP Camera's focus, please rotate the focus ring.

There are LEDs indicating the IP Camera status and networking status.

- **Power**
When the IP Camera is power on, the LED will light on.
- **WLAN (ICA-107W only)**
When the IP Camera is linking with wireless interface, the LED will light on. This LED will flash when video is transmitting or receiving.
- **LAN**
When the IP Camera is linking to wired interface, the LED will light on. This LED will flash when video is transmitting or receiving.



Front view of IP Camera

(Example on ICA-107W)

4.2. Hardware Connection

- **Power Input**

The DC power input connector is located on the IP Camera's bottom panel, and is labeled 12V DC with a single jack socket to supply power to the IP Camera. Power will be generated when the power supply is connected to a wall outlet.

- **Ethernet Jack**

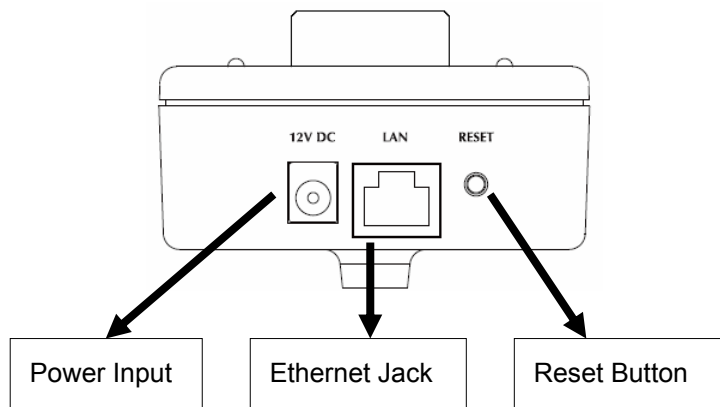
The IP Camera's bottom panel features an RJ-45 connector for connections to 10Base-T Ethernet cabling or 100Base-TX Fast Ethernet cabling (which should be Category 5 twisted-pair cable). The port supports "Auto-MDIX" function, allowing the IP Camera to automatically detect or negotiate the transmission speed of the network. For ICA-107P, this port is also the PoE interface.

- **Antenna Connector (ICA-107W only)**

ICA-107W provides a standard Reverse SMA connector on its top panel. The external antenna allows you to adjust its position to obtain the maximum signal.

- **Reset Button**

1. Press the reset button (for less than 2 seconds) and the IP Camera will reboot.
2. Press the reset button for more than 5 seconds and the IP Camera will reset to the factory default. The factory default settings are listed in the table below.



Bottom View of IP Camera

(Example on ICA-107)

Factory Default Setting

IP Address	192.168.0.20
Default Account	Admin
Default Password	Admin
Default Http Port	80
Default Video Port	4321

Installation Procedure

1. Unpack the package and verify that all the items listed in the Chapter 2 are available.
2. Connect the IP Camera to your network with the attached network cable; please connect the IP camera to your network switch or router.
3. Connect the power adapter to IP Camera and plug the power adapter to power outlet. The IP Camera will be powered on. When the IP Camera is ready, the Power LED will light on.
4. Make sure that you have installed the **ActiveX** utility.

Note: It is highly recommended to use the power adapter shipped with the IP Camera, do NOT use any other power adapter from other sources. It may make the IP Camera damage.

5. Software Installation

Follow the steps below to install the utilities. The following installation is implemented in Windows XP and the installation procedure is similar to Windows 2000.

1. Insert the CD shipped along with the IP Camera into your CD-ROM drive. The installation page should open with your default browser. If not, please double click on the “default.htm” in the CD.
2. Click on the hyperlink “Install Administrator Utility”.



PLANET
Networking & Communication

Wired / Wireless / PoE CMOS IP Camera

ICA-107 / 107W / 107P
2081-AB3620-000

About This CD-ROM

>> ICA-107 / 107W / 107P

- [User's Manual](#) The User's Manual in PDF format
- [Quick Installation Guide](#) The Quick Guide in PDF format
- [Install Administrator Utility](#)

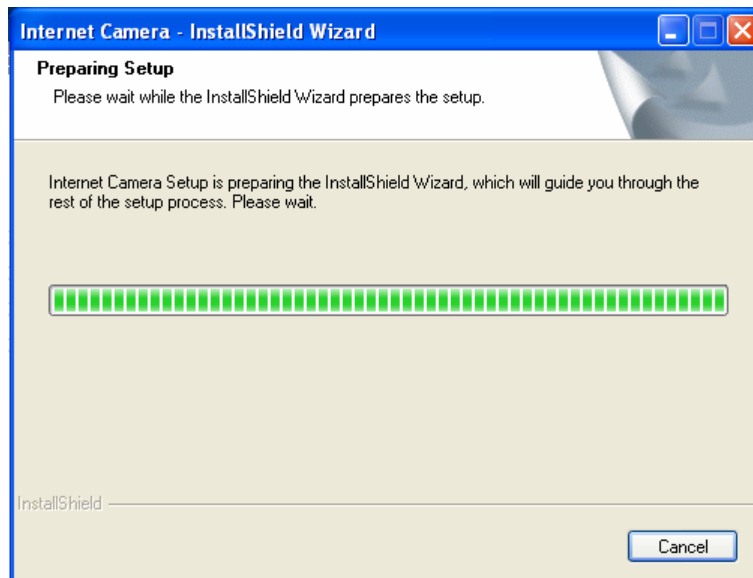
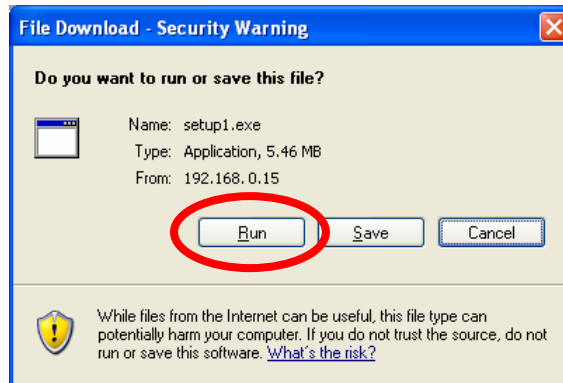
>> Software to help you browse this CD-ROM

- [Adobe Acrobat PDF Reader](#)

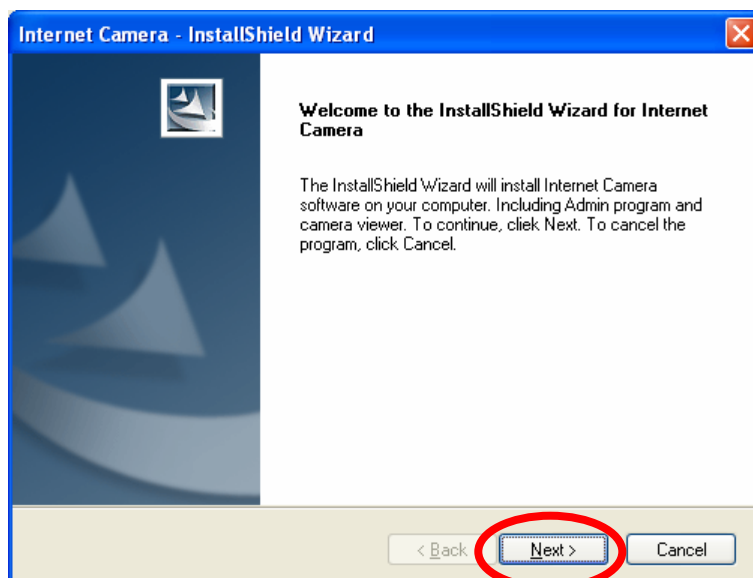
Or to browse this CD-ROM, click [Here](#).

PLANET Technology Corp.
Tel: +886 2 2219-3518
Fax: +886 2 2219-3528
URL: <http://www.planet.com.tw>
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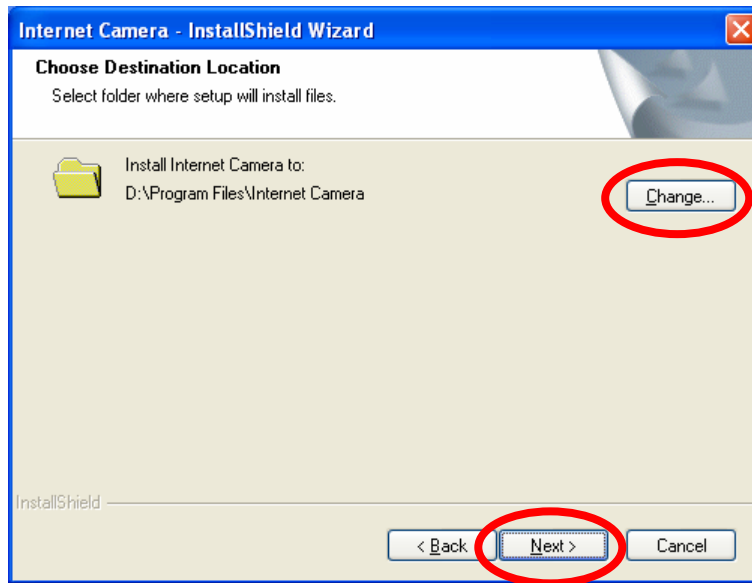
3. After clicking on the “Install Administrator Utility” hyperlink, the browser should prompt to download the installation program. Click on the “Run” button, the installation program should be started.



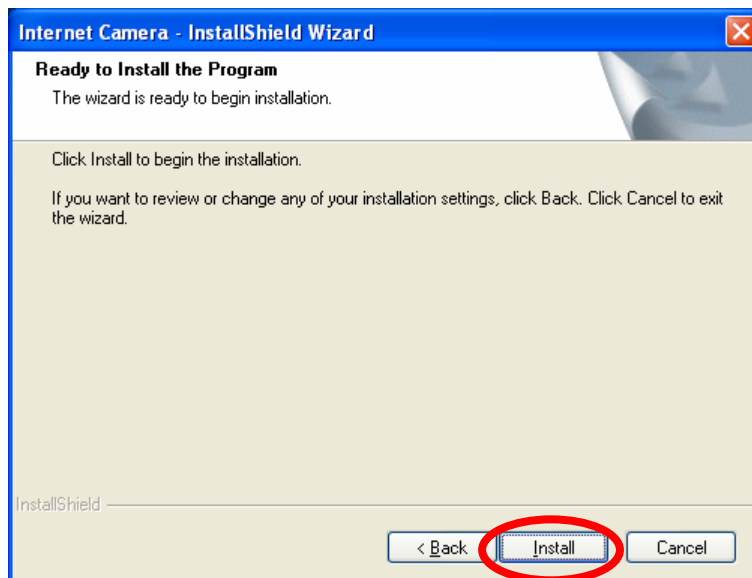
4. Click “Next” to start the installation.



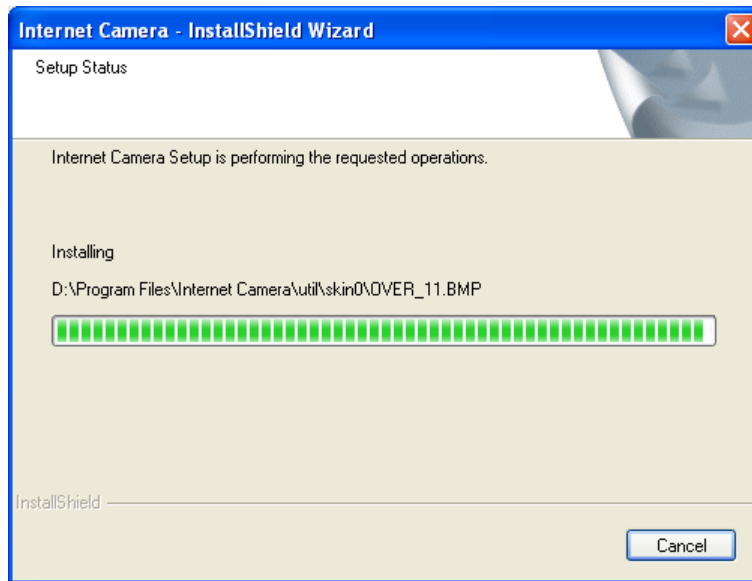
5. Click on the “Change” button to choose the destination you wished to install the utility. If no specific requirement, leave the default setting and click “Next”.



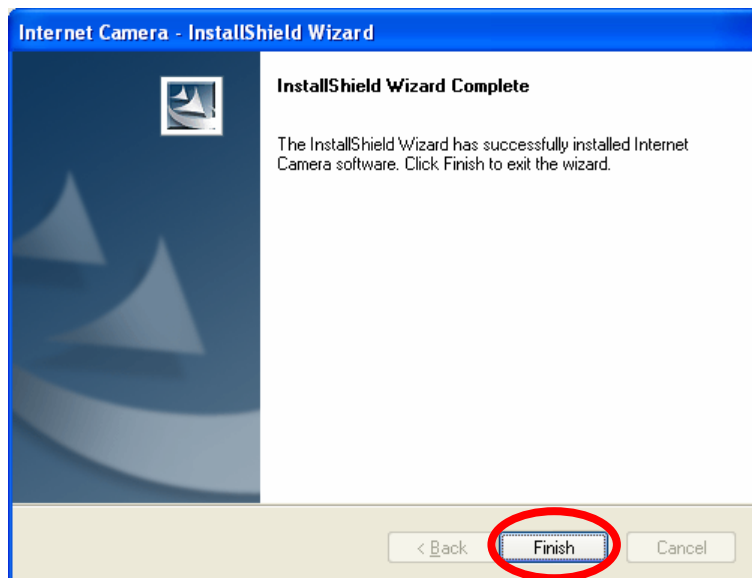
6. Click “Install” to start installing the utility.



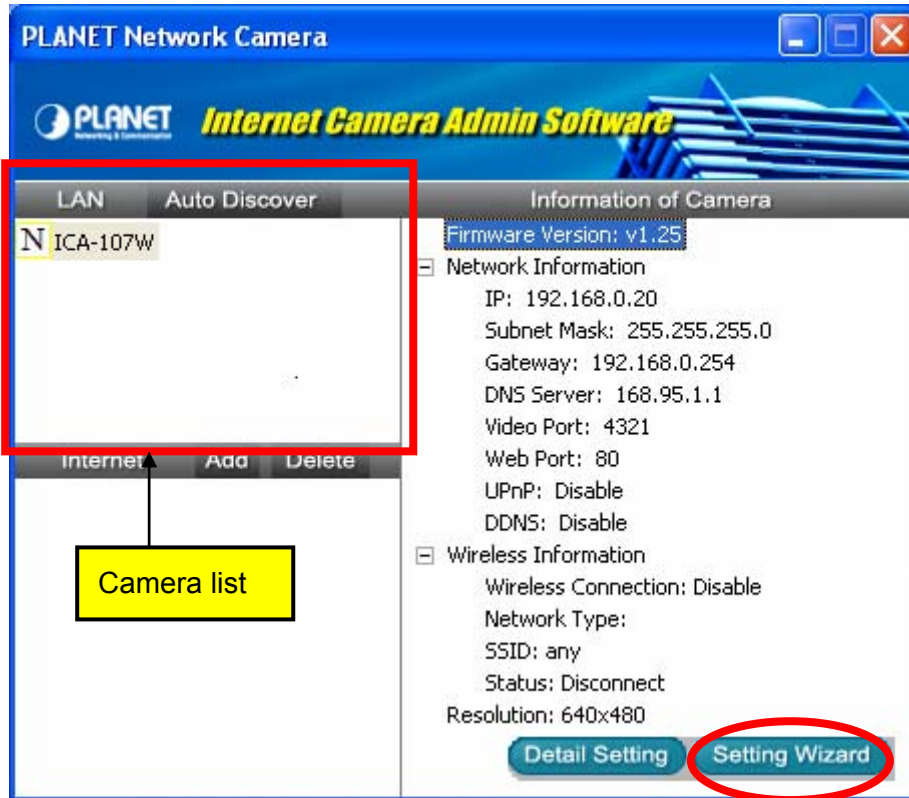
7. The system will install the program automatically.



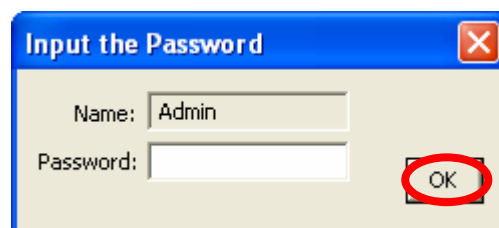
8. Click "Finish" to complete the software installation.



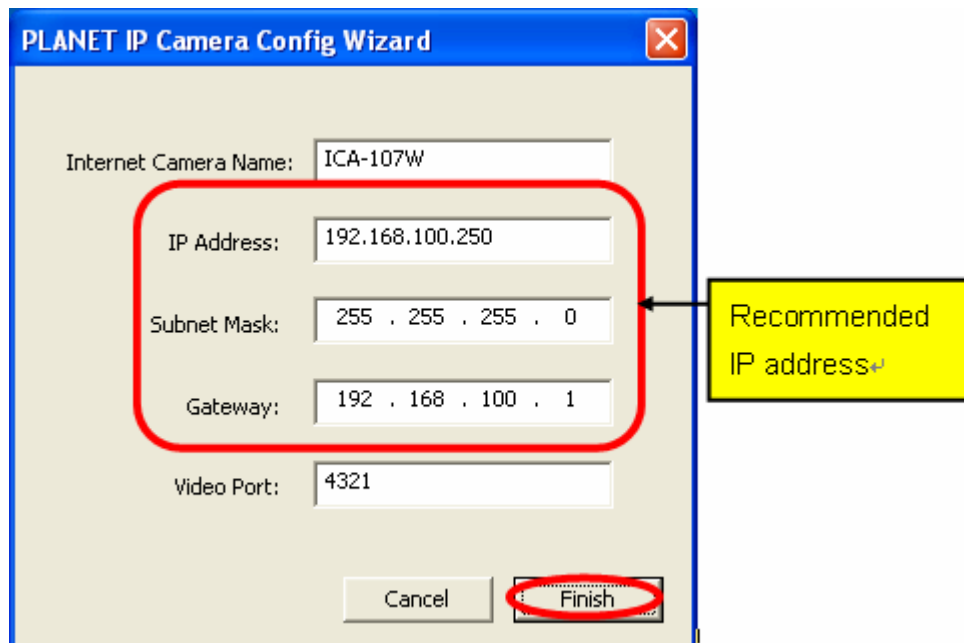
9. After the installation, IP Camera Admin will launch automatically. It will start to search the IP Cameras in your intranet and it will list all the available IP Cameras on the camera list. Choose the one that you would like to configure and click “Setting Wizard” to processed.



10. Please enter the default password “Admin” and click “OK” to login to the IP Camera’s setup page.



11. To let the IP Camera work, you should configure the IP Camera's IP address as you want. The utility will try to find an available IP address and recommend you using that address. Besides work with the recommended IP, you may input the IP address manually. Please be aware that the IP address of the IP Camera must be in the same IP segment of your . Click "Finish" to apply the configuration.



12. After press "Finish", the camera will restart. Please wait for a minute. Then you may refer to next section to start the configure utility and setup your IP camera.

6. Using the IP Camera Admin

The IP Camera Admin allows users to search and setup the cameras located within the Intranet. With the IP Camera Admin, users can view all the information about the selected IP Camera; furthermore, it provides a setting wizard, which can guide users to add the IP Camera to the network easily and promptly.

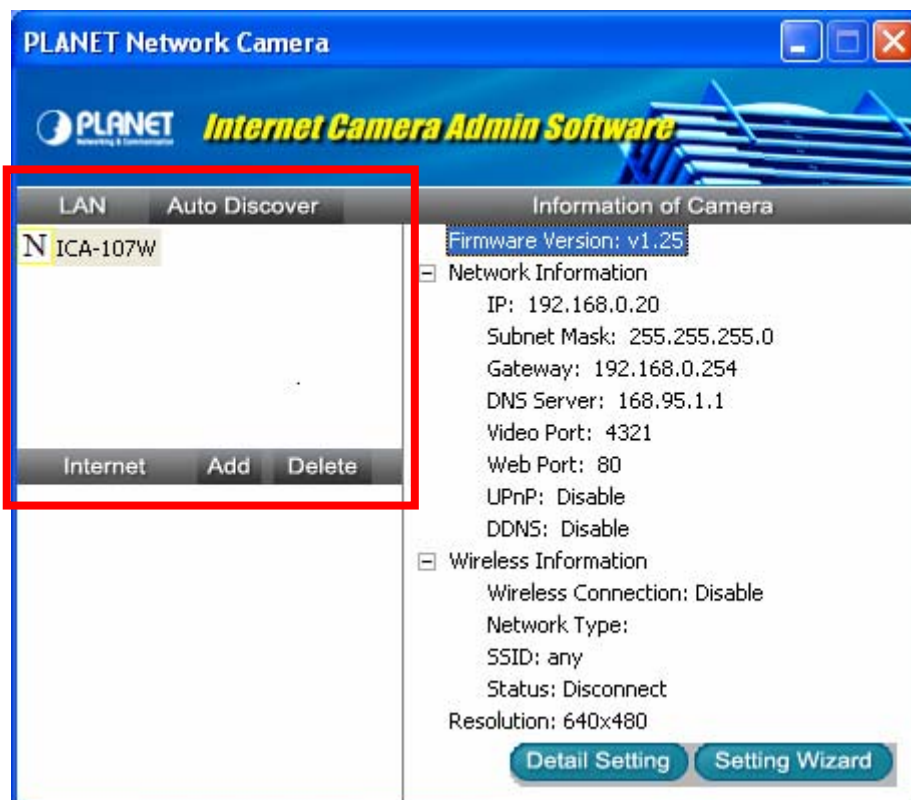
There are two ways to run the IP Camera Admin:

1. Click “Start”, select “Programs”→“IP Camera” →”Admin Utility” to run the utility.

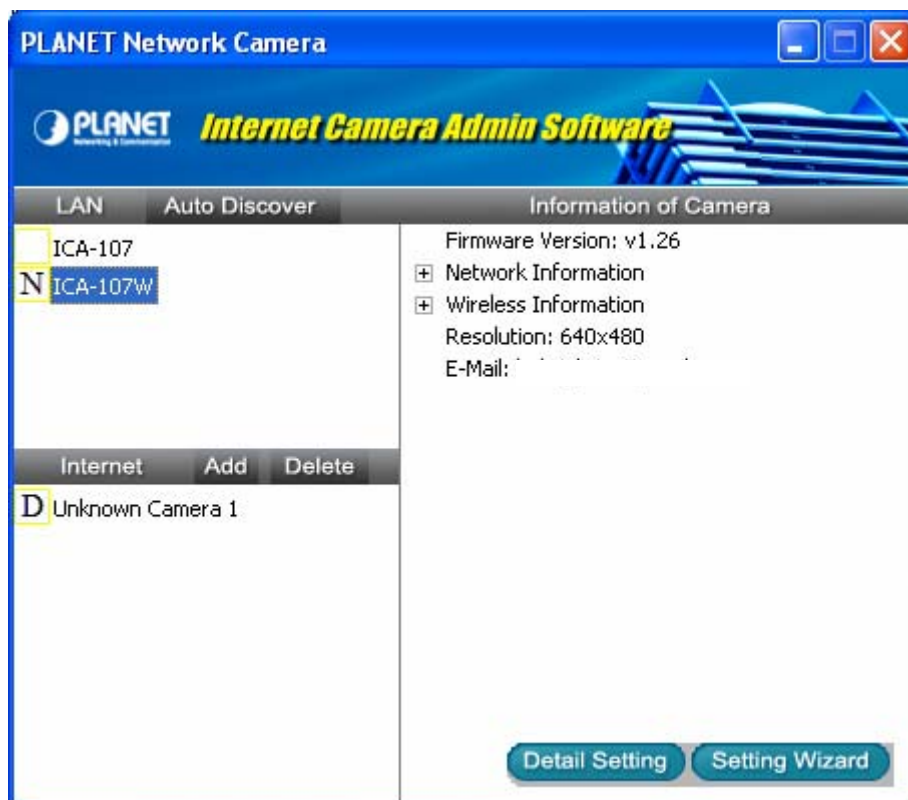


2. Double click the IP Camera Admin icon () on the desktop to run the utility.

Once the utility is started, it will search the available IP Cameras in your intranet. For further configurations, please refer to the following sections.



6.1. General Setting



LAN

Auto Discover

The IP Camera Admin will search all the available IP Camera within the network when you click on this button.

Camera List

The name and setting status of the IP Camera will show in this list.

The “**N**” icon means the configuration of the IP Camera is in the status of factory default.

The “**□**” icon means the IP Camera has been configured before.

The “**D**” icon means the camera is unknown.

Internet

Add and Delete Button

The functions located in this area are reserved for future use.

Information of Camera

Camera Information

All information about the selected IP Camera will display here. The information includes Firmware Version, Network Information, IP Address, UPnP Setting, DDNS Setting, Resolution and E-mail

setting, etc.

Camera Setting

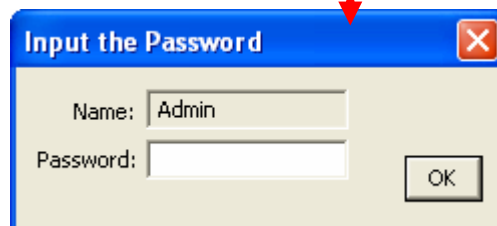
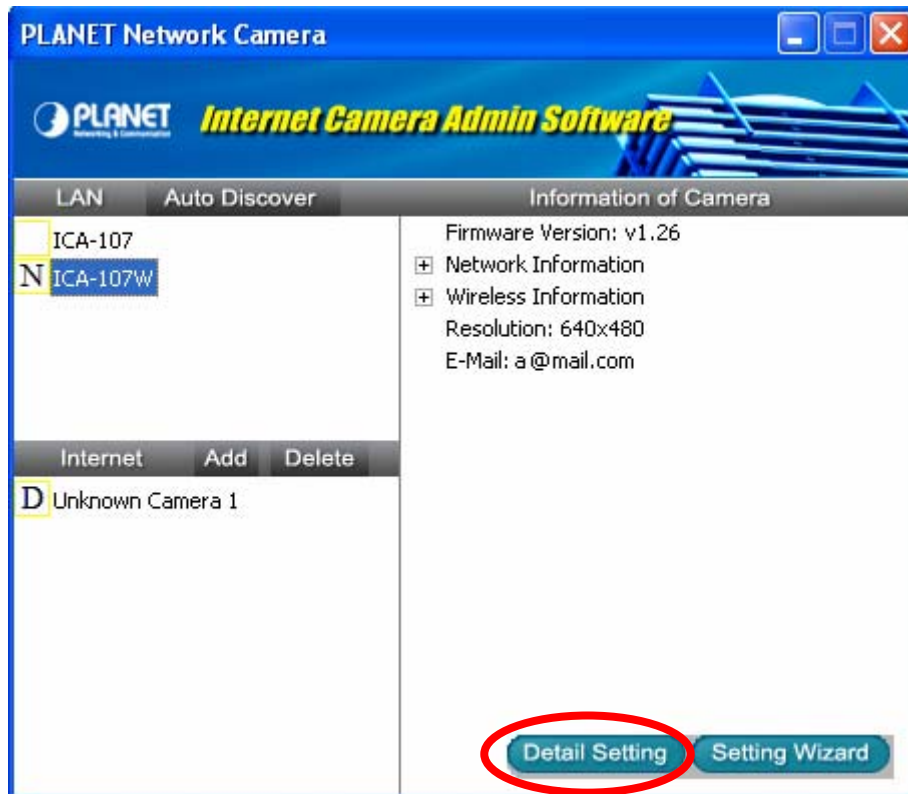
Detail Setting	You might use this function for further configuring the IP Camera, such as IP address, Resolution, password and firmware upgrade, etc.
Setting Wizard	You might use this function to configure the camera name, IP address and the video port of the IP Camera.

6.2. Detail Setting

After clicking on the “Detail Setting”, the IP Camera Admin will ask you to enter the “Administrator Name” and “Password” for authentication. The default administrator name / password are:

Administrator Name: “Admin”

Password: “Admin”



After entering the password and clicking on the “OK” button, you could start to configure your IP Camera.

6.2.1. Network Setting

The screenshot shows the 'Edit PLANET Network Camera' configuration window. The window has a blue title bar with the text 'Edit PLANET Network Camera' and a close button. Below the title bar is a tabbed interface with four tabs: 'Network Settings', 'Wireless Settings', 'E-Mail Settings', and 'PPPoE Settings'. The 'Network Settings' tab is selected. The main area of the window contains the following settings:

- DHCP: Enable Disable
- Camera Name:
- IP Address:
- Subnet Mask:
- Gateway:
- DNS Server:
- Video Port:
- Web Port:

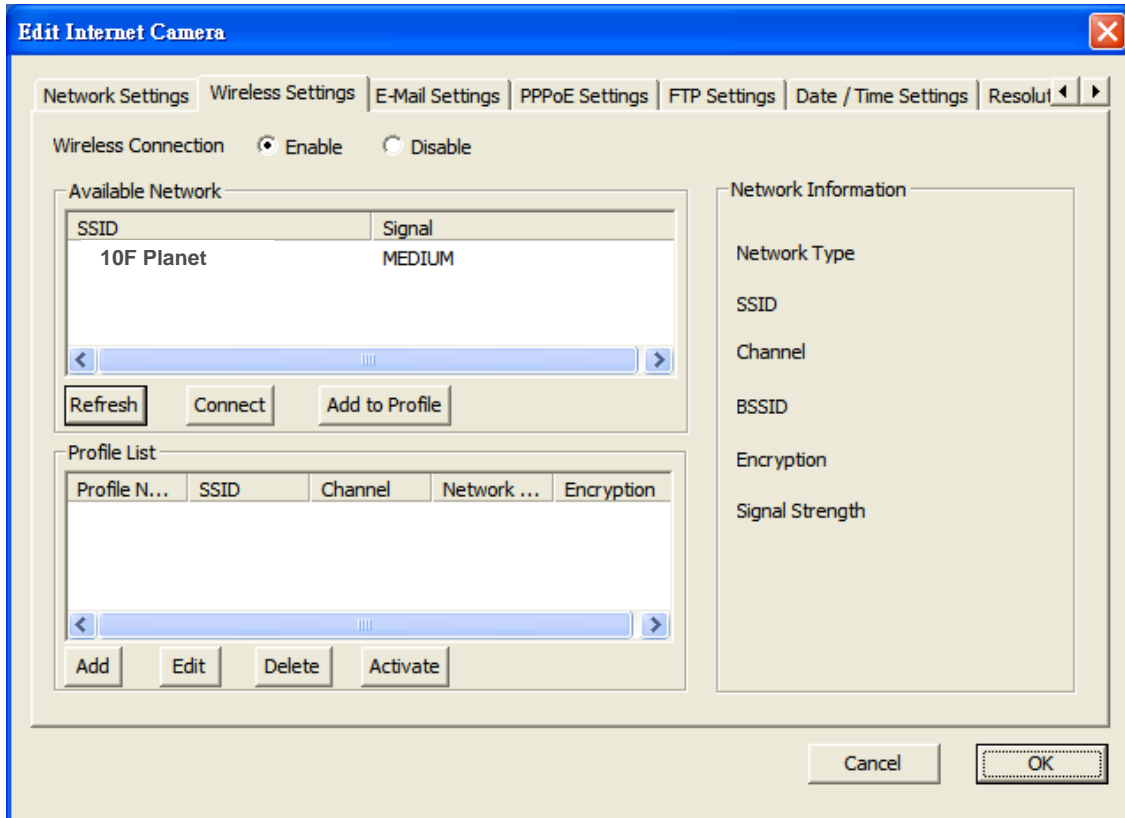
At the bottom of the window are two buttons: 'Cancel' and 'OK'.

Network Setting

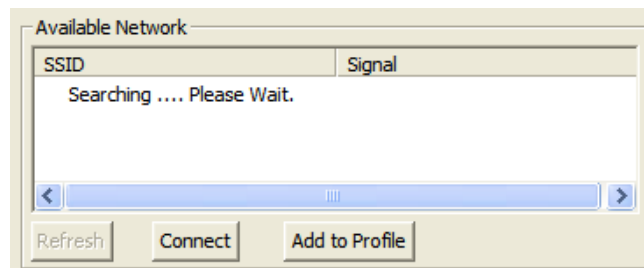
DHCP	Enable or disable the DHCP function here.
Camera Name	It is recommended to name a meaningful name for the camera. For example, "Living Room", "Front Door". That will help you to recognize the IP Camera more easily.
IP Address	Please assign an available IP address to your IP Camera.
Subnet Mask	Please input the subnet mask that you want to use here.
Gateway	Please input the gateway that you want to use here.
DNS Server	Please input the desired DNS server here.
Video Port	The IP Camera uses the Video Port to transmit or receive the video streaming. The default port is "4321".
Web Port	The default port used by the web is 80. You might use a different port for the web of the IP Camera. If you change this to another port number, for example, 8080, then you are required to use this

dedicated port to access the web page, for example:
<http://192.168.0.20:8080>.

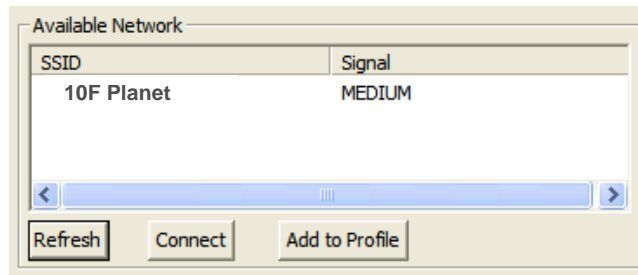
6.2.2. Wireless Settings (ICA-107W Only)



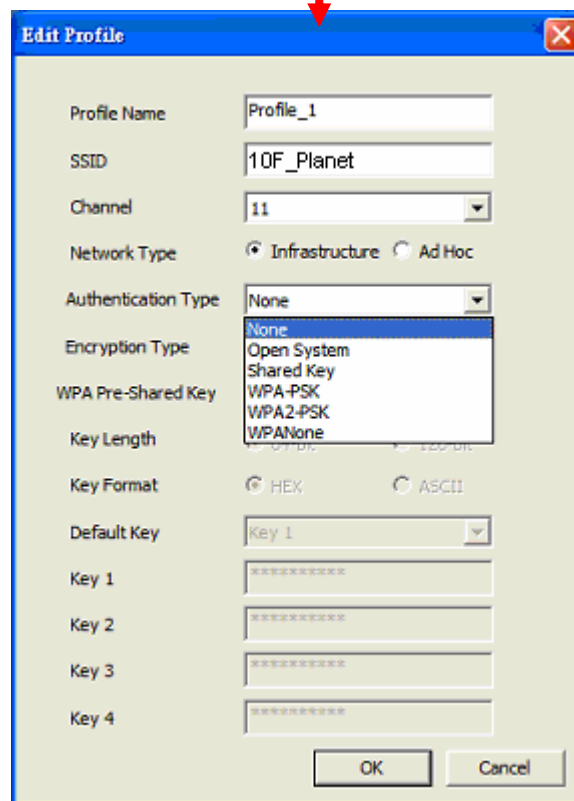
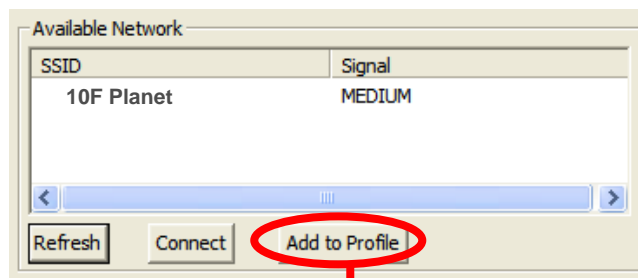
The IP Camera Admin will find available wireless network automatically. You could also press the “Refresh” button to find the available wireless network manually.



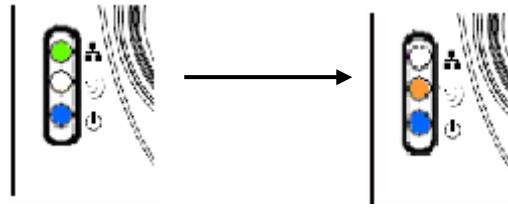
After refresh procedure, there will show the available wireless networks.



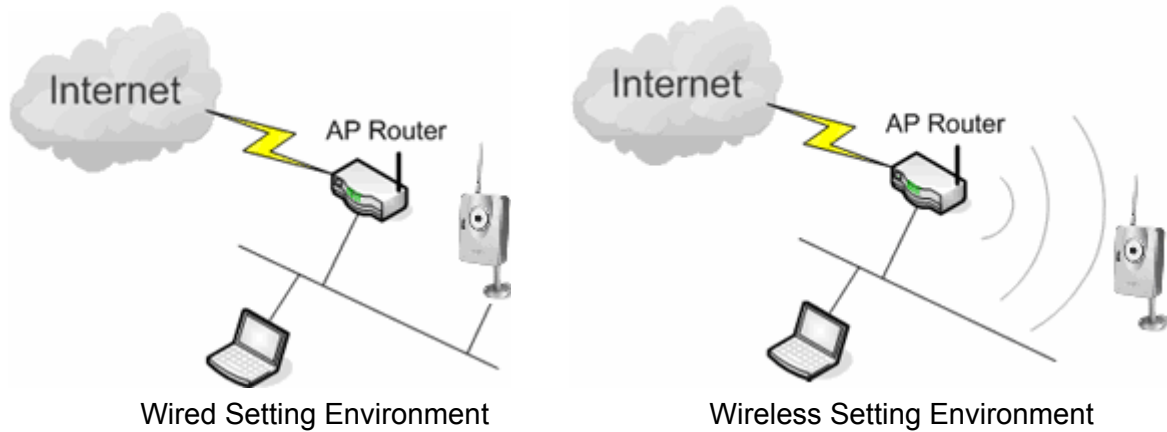
You might press “Connect” for connecting to the AP directly or “Add to Profile” to configure the security setting of the wireless network.



ICA-107W supports WEP (Open System/Shared Key), WPA-PSK, WPA2-PSK and WPANone. Please select the responding security setting of the desired wireless network. After set the profile, you might remove the LAN cable, and the IP Camera will connect to the AP automatically. When the connection established, you will see the wireless LED (orange color) light on.



LED Status Diagram



- a.) You should configure the wireless settings via the wired connection when you first time to set the ICA-107W to wireless interface.
- b.) After the configuration is done, you might remove the cable then the wireless connection should start automatically.

6.2.3. E-Mail Setting

The screenshot shows a window titled "Edit Internet Camera" with a close button (X) in the top right corner. The window has four tabs: "Network Settings", "Wireless Settings", "E-Mail Settings" (which is selected), and "PPPoE Setti". Inside the "E-Mail Settings" tab, there is a "Send a Test Email" button at the top. Below it are several input fields: "Recipient E-Mail Address:", "SMTP Server:", "Sender E-Mail Address:", "SMTP Authentication:" (with radio buttons for "Enable" and "Disable", where "Disable" is selected), "Username:", and "Password:". At the bottom of the window are "Cancel" and "OK" buttons.

E-Mail Setting

Recipient E-Mail Address	You can snapshot a picture and send the picture by E-Mail. Enter the E-Mail Account for receiving the picture.
SMTP Server	Enter the SMTP Server for the E-Mail sending.
Sender E-Mail Address	Specified the e-mail address of sender.
Authentication	Enable or Disable the SMTP Authentication function
Username	When E-Mail Authentication is enabled, please input the SMTP Username here.
Password	When E-Mail Authentication is enabled, please input the password here.
Send a Test Email	Press this button to send a test e-mail to your mailbox. You can use this function to test if your setting is correct.

6.2.4. PPPoE Settings

The screenshot shows the 'Edit Internet Camera' window with the 'PPPoE Settings' tab selected. The 'PPPoE' sub-dialog is visible, showing the 'Disable' radio button selected. The 'Username', 'Password', and 'MTU' fields are present, with 'MTU' set to 1392. The 'OK' button is highlighted with a dashed border.

PPPoE Settings

Enable/Disable

Enable or Disable the PPPoE connection here.

Username

Enter the Username of your PPPoE account.

Password

Enter the Password of your PPPoE account.

MTU

Maximum Transmission Unit (MTU) is the largest frame that could be transmitted through the PPPoE connection. The MTU is specified in octets (eight-bit bytes). If there is no other request, please leave it as default value.

6.2.5. FTP Settings

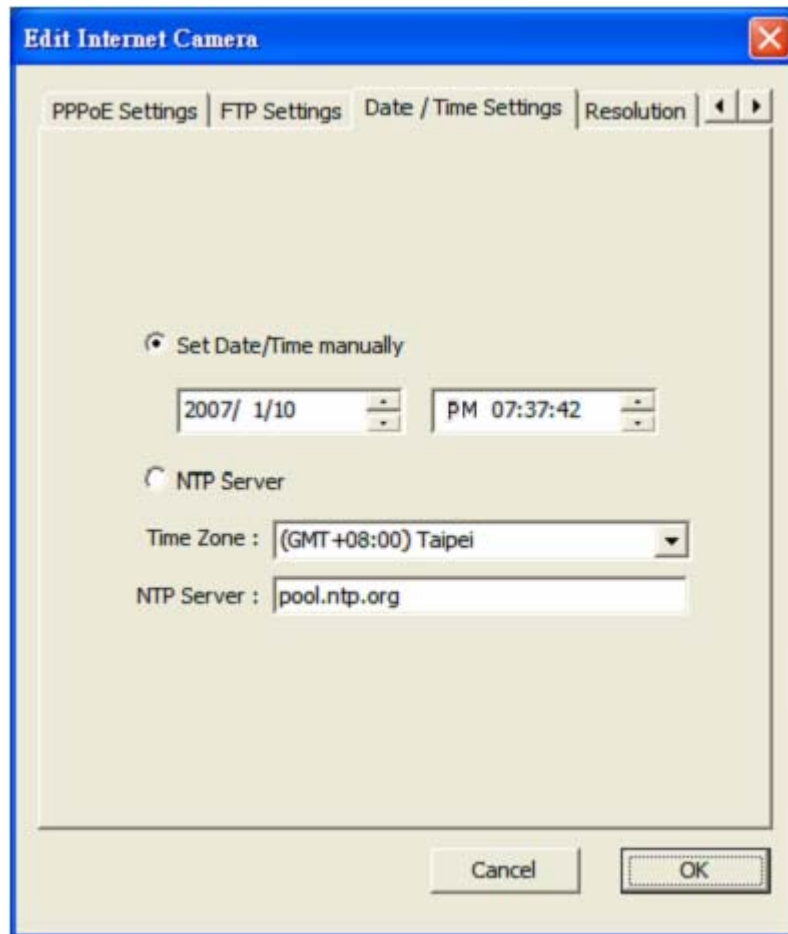
The screenshot shows the 'Edit Internet Camera' window with the 'FTP Settings' tab active. The fields are as follows:

- FTP Server: [Empty text box]
- FTP Port: [21]
- User Name: [Empty text box]
- Password: [Empty text box]
- Remote Folder: [Empty text box]
- Passive Mode: Enable Disable

FTP Settings

FTP Server	The IP Camera could upload picture to the FTP server when you enable the motion detection function. Please enter the IP address of the FTP server that you want to use.
FTP Port	Please enter the FTP port number that your FTP server uses. In most case, the FTP server should use TCP port 21.
User Name	Specify the user account of ftp server.
Password	Specify the password of your ftp account.
Remote Folder	Specify the folder of the ftp site that you want to store the video.
Passive Mode	If your IP Camera is under NAT, you usually need to enable this feature.

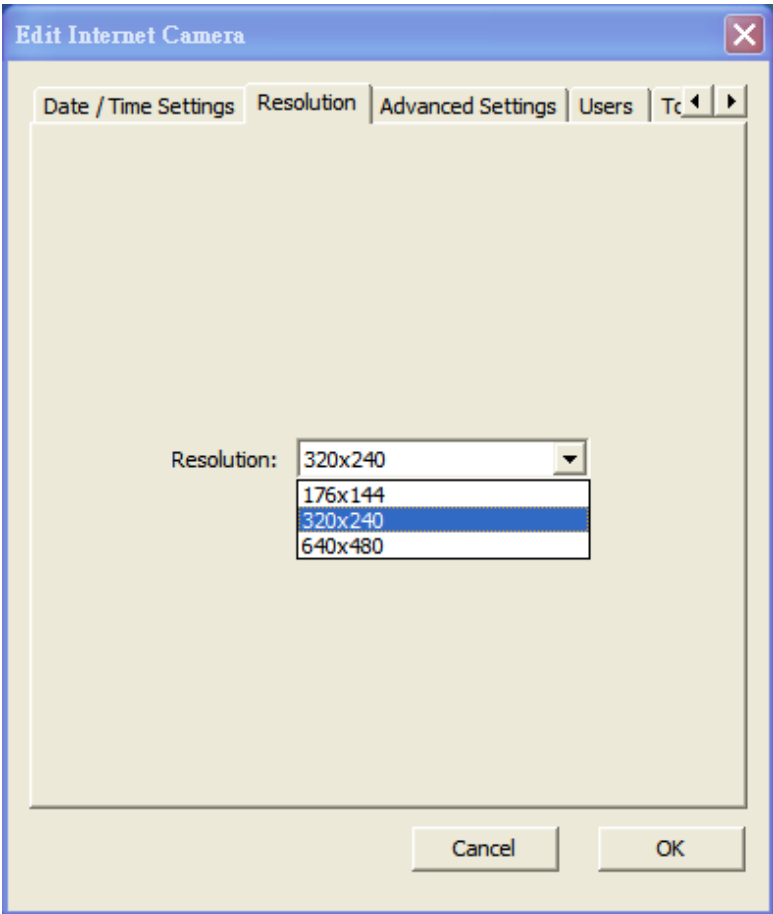
6.2.6. Date / Time Settings



Date / Time Settings

Set Date/Time manually	Set the current Date and Time here.
NTP Server	Enable or Disable the NTP client here.
Time Zone	Select your time zone here.
NTP Server	Specify the IP address of the NTP server.

6.2.7. Resolution



Resolution

Resolution You might select the desired video resolution here. Available resolutions are: 176 x 144, 320 x 240, 640 x 480.

6.2.8. Advanced Setting

The screenshot shows the 'Edit Internet Camera' window with the 'Advanced Settings' tab selected. The 'UPnP' section has the 'Disable' radio button selected. The 'DDNS' section has the 'Disable' radio button selected. Below the radio buttons, there are four input fields: 'Provider' is a dropdown menu set to 'DynDNS', 'Domain Name' is a text box containing 'ddns-host', 'Account' is a text box containing 'ddns-account', and 'Password' is a text box containing a series of asterisks. At the bottom of the window are 'Cancel' and 'OK' buttons.

Advanced Setting

UPnP	Enable or Disable UPnP here.
Enable/Disable DDNS	Enable or disable DDNS function of the IP Camera.
Provider	The IP Camera supports the service from DynDNS, for further information, please refer to: http://www.dyndns.org
Domain Name	The domain name given by DynDNS is "registername.dyndns.com". Please enter the domain name that you register for the IP Camera from DynDNS web site.
Account	Enter the login name for the DDNS service.
Password	Enter the password for the DDNS service.

6.2.9. Users

Edit Internet Camera

Date / Time Settings | Resolution | Advanced Settings | **Users** | Tools | About

Administrator

Login Name: Admin New Password:

Current Password: Confirm New Password:

User

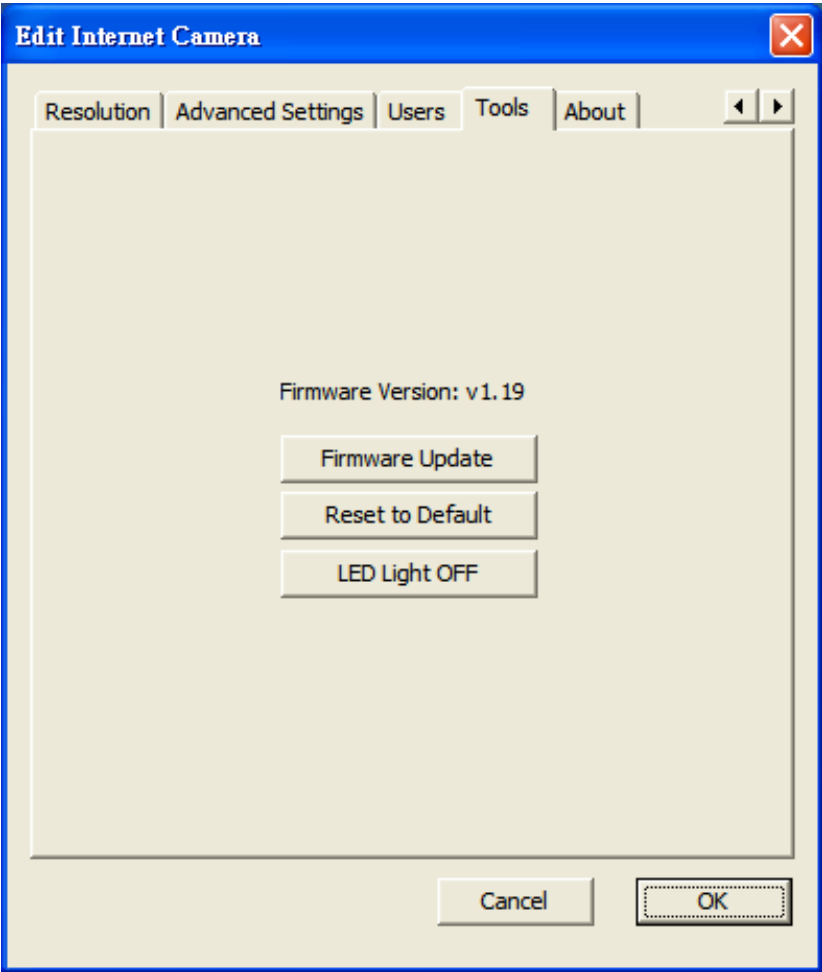
	User Name	Password	Confirm Password
<input type="checkbox"/> User Account 1	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> User Account 2	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> User Account 3	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> User Account 4	<input type="text"/>	<input type="text"/>	<input type="text"/>

Cancel OK

Users

Administrator	Setting the password of Administrator account
Current Password	Enter the current password of the IP Camera.
New Password	Enter the new password you want to use for the IP Camera.
Confirm New Password	Retype the new password to confirm the setting.
User	You might Enable/Disable the user accounts and setting the user name and password here. The IP Camera could support up to 4 user accounts.

6.2.10. Tools

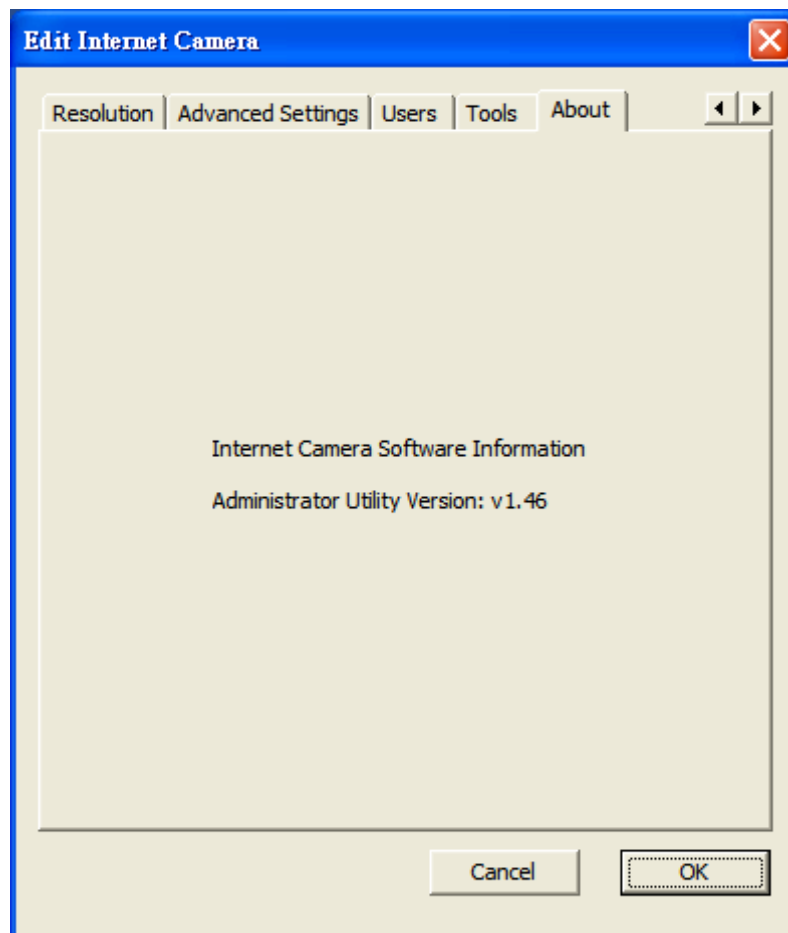


Tools

Firmware Version	Display current firmware version.
Firmware Update	You could upgrade IP Camera’s firmware via this function. Press this button and select the correct firmware to upgrade.
Reset to Default	If you want to reset the IP Camera to factory default, you might click on this button. The default settings of the IP Camera are as follows. Camera Name: “ICA-107(W / P)” IP Address: “192.168.0.20” Subnet Mask: 255.255.255.0 Administrator Name: “Admin” Password: “Admin” Video Port: “4321”

LED Light ON/OFF Web Port: "80"
You might turn all the IP Camera's LEDs ON/OFF via this button.
It can let the people don't know this camera is monitoring.

6.2.11. About



About

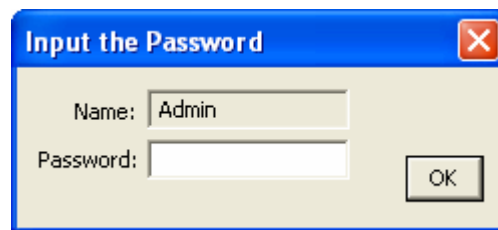
Administrator Utility Display current Administrator Utility Version.
Version

6.3. Setting Wizard

When you click the “Setting Wizard”, the IP Camera Admin will ask you to enter the “Administrator Name” and “Password”. The default value is as follows.

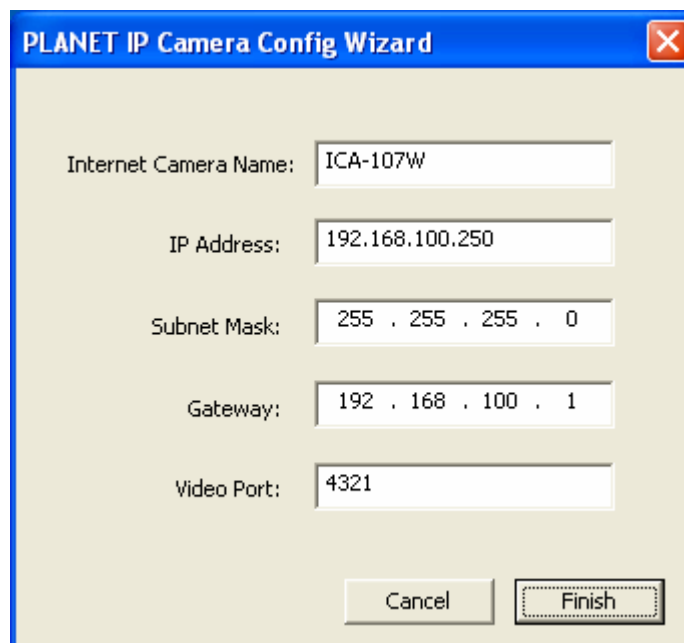
Administrator Name: “**Admin**”

Password: “**Admin**”



The screenshot shows a dialog box titled "Input the Password". It has two text input fields: "Name:" with the value "Admin" and "Password:" which is currently empty. To the right of the "Password:" field is an "OK" button. The dialog box has a blue title bar and a close button in the top right corner.

If the name and password you entered are correct, you can start to setup the camera.



The screenshot shows a dialog box titled "PLANET IP Camera Config Wizard". It contains several text input fields for configuration: "Internet Camera Name:" with "ICA-107W", "IP Address:" with "192.168.100.250", "Subnet Mask:" with "255 . 255 . 255 . 0", "Gateway:" with "192 . 168 . 100 . 1", and "Video Port:" with "4321". At the bottom, there are "Cancel" and "Finish" buttons. The dialog box has a blue title bar and a close button in the top right corner.

Network Setting

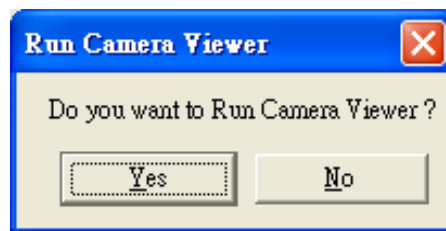
- | | |
|-------------|--|
| Camera Name | It is recommended to name a meaningful name for the camera. For example, “Living Room”, “Front Door”. That will help you to recognize the IP Camera more easily. |
| IP Address | Please assign an available IP address to your IP Camera. |
| Subnet Mask | Please input the subnet mask that you want to use here. |

Gateway

Please input the gateway that you want to use here.

DNS Server

Please input the desired DNS server here.



After you finish the camera setting, the IP Camera Admin will ask if you want to start the IP Camera Viewer. You could click on "Ok" to run the IP Camera Viewer immediately or click on "Cancel" to run the IP Camera Viewer later.

7. Using the Camera Viewer

The IP Camera Viewer allows users to view video up to four IP Cameras at the same time. It also allows users to manual/schedule recording video and playback the video file. The status of cameras such as frame rate, video received, and etc are also displayed on the screen at the same time.

There are three ways to run the IP Camera Viewer:

1. Click “Start”, select “Programs” → “IP Camera” → “Camera Viewer” to run the utility.

2. Double click on the IP Camera Viewer icon () to run the utility.

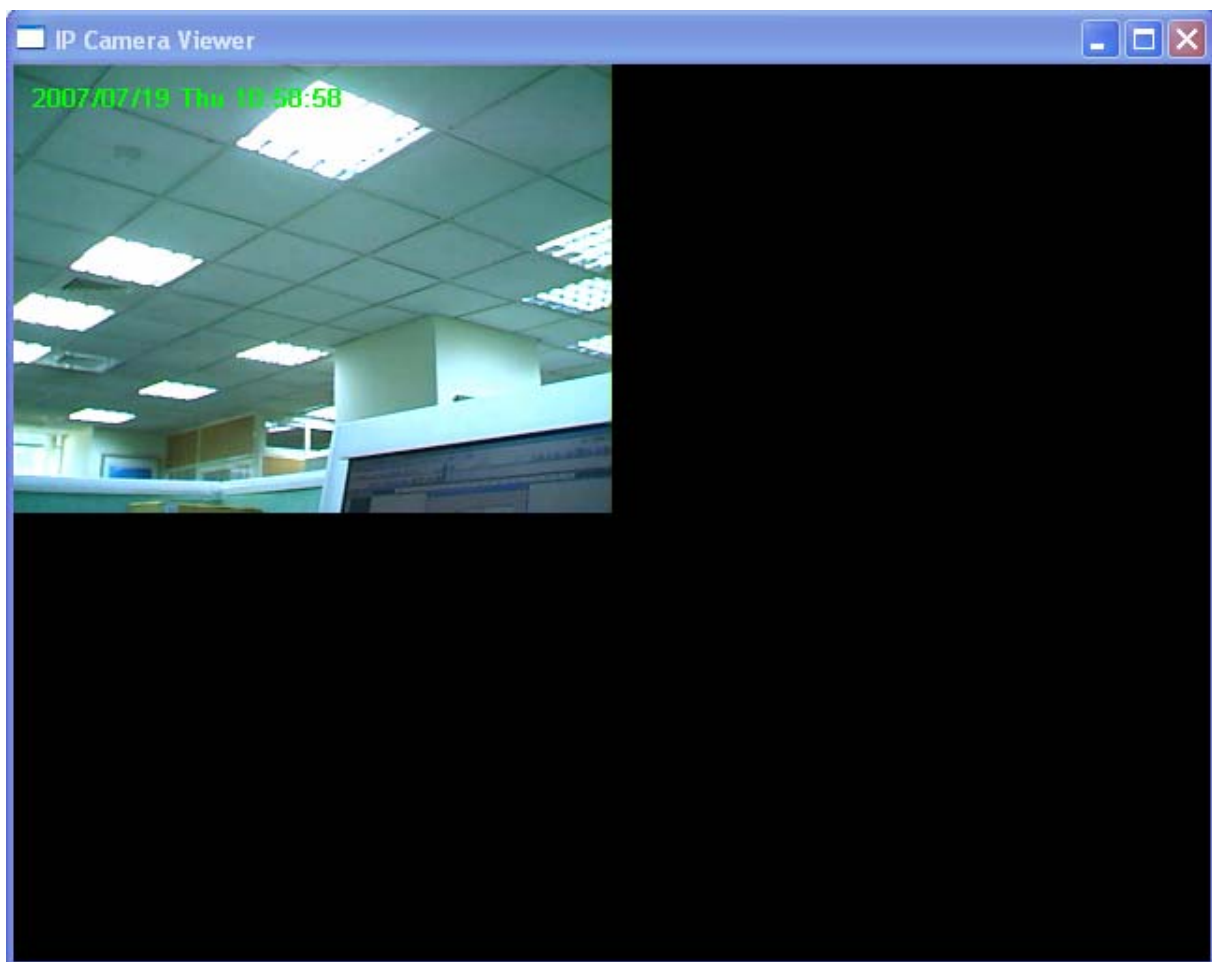
3. Click “Setting Wizard” from IP Camera Admin and follow the instructions to launch the IP Camera Viwer.

7.1. Introduction to the Control Panel

When you start the IP Camera Viewer, you would see a Control Panel and the Viewer window.



Control Panel



Viewer Window

7.2. Camera Buttons



Camera Buttons

Camera



Please click on one of these number buttons for connecting to the selected IP Camera. If you want to remove the camera from the IP Camera Viewer, please **right click** on the icon and select “Reset Camera x”. If you want to modify the channel setting, please **right click** the icon and select “Configure Camera x”.

7.3. Camera Status

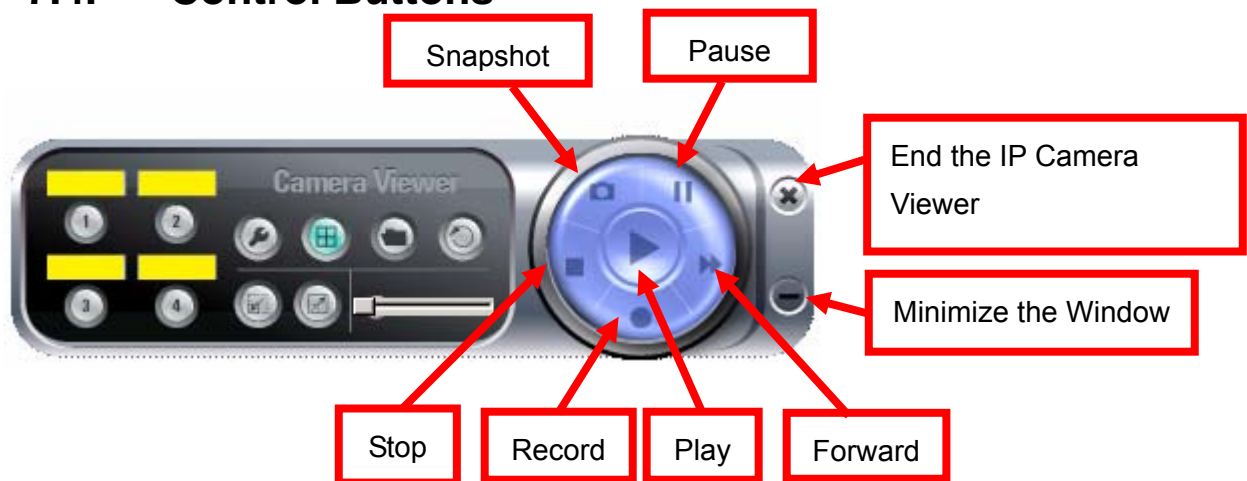
Above the Number button, there are status bars that will indicate the different status of the IP Camera. Please refer to the table below to check the status of your IP Camera.





Camera Status

Yellow	The channel has not been configured yet.
Blue	The IP Camera is connected and playing the live video.
Pink	The IP Camera is not connected now.
Red	The IP Camera is recording.

7.4. Control Buttons



Control Buttons

Play 	In Display mode, clicking on the “Play” button, the IP Camera Viewer will connect to the disconnected IP Camera. In Playback mode, clicking on the “Play” can play the video.
Stop 	In the Display mode, clicking on the “Stop” button, the IP Camera Viewer will disconnect the IP Camera. In the playback mode, clicking on the “Stop” can stop playing the video.
Pause	Clicking on the “Pause” button, the IP Camera Viewer will pause the current video display. You might use the “Play” button to



Forward



Snapshot



Record



resume the video display.

Clicking on the “Forward” button to forward the speed when you play the recording file.

Clicking on the “Snapshot” button will make the IP Camera Viewer to take a snapshot of the video and save the picture as a bitmap file in the hard disk. (You will learn how to set the directory for storing these bitmap files at the Section 7.8.4)

By clicking “Record” button you can record video immediately. (You will learn how to set the directory for storing video files at the section 7.8.4)

7.5. Video Recording

The IP Camera Viewer allows you to record the video in the “.AVI” files. There are two ways of video recording – Manual Recording and Schedule Recording.

Manual Recording

You can manually record the video stream into an assigned video file.

Click “Record”, then the IP Camera Viewer will start to record the video stream. You can assign the path in the setting dialog.(please see section 7.8.4) Clicking “Stop” will stop recording.

Note: Before manual recording, you have to click the camera button to select the IP Camera that you want to record first and make sure that the IP Camera Viewer is successfully connecting to the IP Camera.

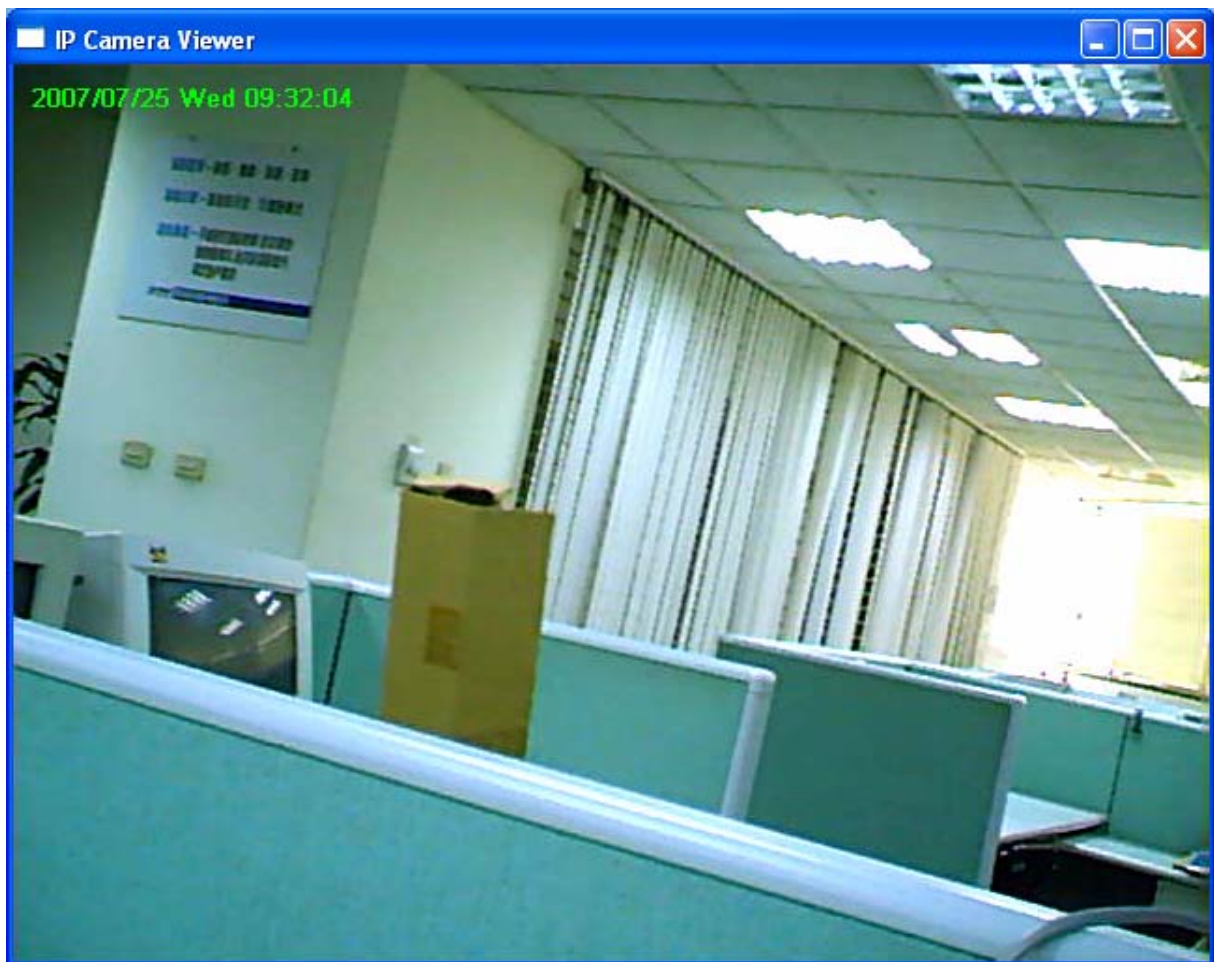
Schedule Recording

You can assign a schedule and let the IP Camera Viewer recording the video stream automatically. Please refer to Section 7.8 to see how to setup schedule for the recording. The file name of the recorded video file is the start time of recording. For example, the file name “IPCamera_2006-10-8-23-56-40.avi” means it was recorded at 2006/10/8 23:56:40.

7.6. Change Resolution

The IP Camera Viewer supports two resolutions, 640x480 (VGA) and 320x240 (CIF). You can change the resolution of each IP Camera by clicking the resolution button.

Note: Before changing the resolution of the IP Camera, you have to select the IP Camera by clicking the camera button first. If you change the resolution of an IP Camera, other clients who are viewing the same IP Camera will also see the video with the changed resolution.



Resolution

VGA

Change the resolution to 640x480 (VGA).




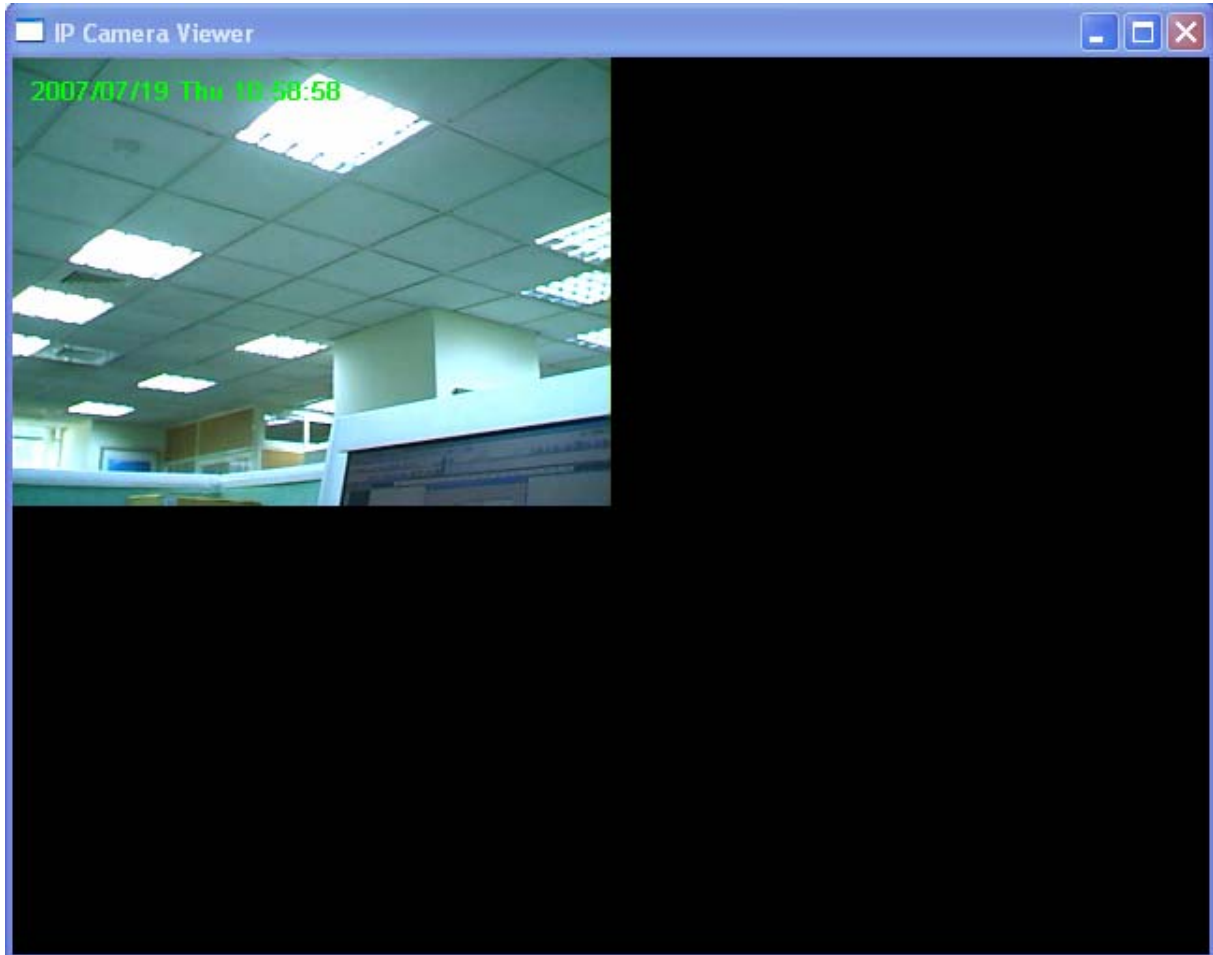
QVGA

Change the resolution to 320x240 (QVGA).




7.7. View Four Cameras Simultaneously

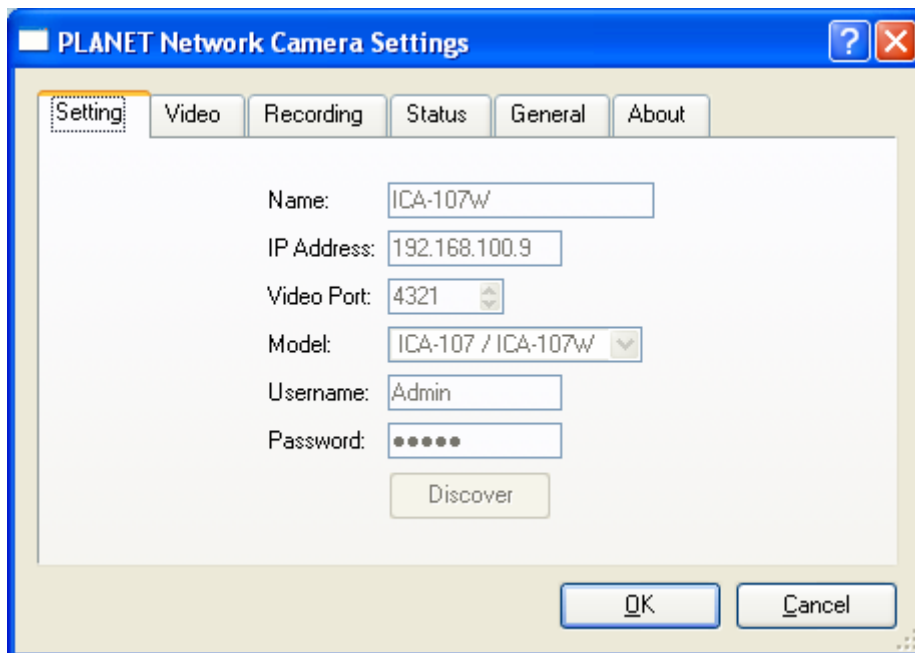
Click the four division button  can view the 4 IP Cameras simultaneously in a four-division window.



7.8. Viewer Utility Setting

Click the “Setting” button , the setting window of the IP Camera will pop up.

Note: If you want to change the settings such as IP Address, Video Port, etc. in the “Setting” option, you must disconnect the Internet Camera first. You might disconnect the IP Camera by clicking on the “Stop” button.



PLANET Network Camera Settings

Setting | Video | Recording | Status | General | About

Name: ICA-107w

IP Address: 192.168.100.9

Video Port: 4321

Model: ICA-107 / ICA-107w

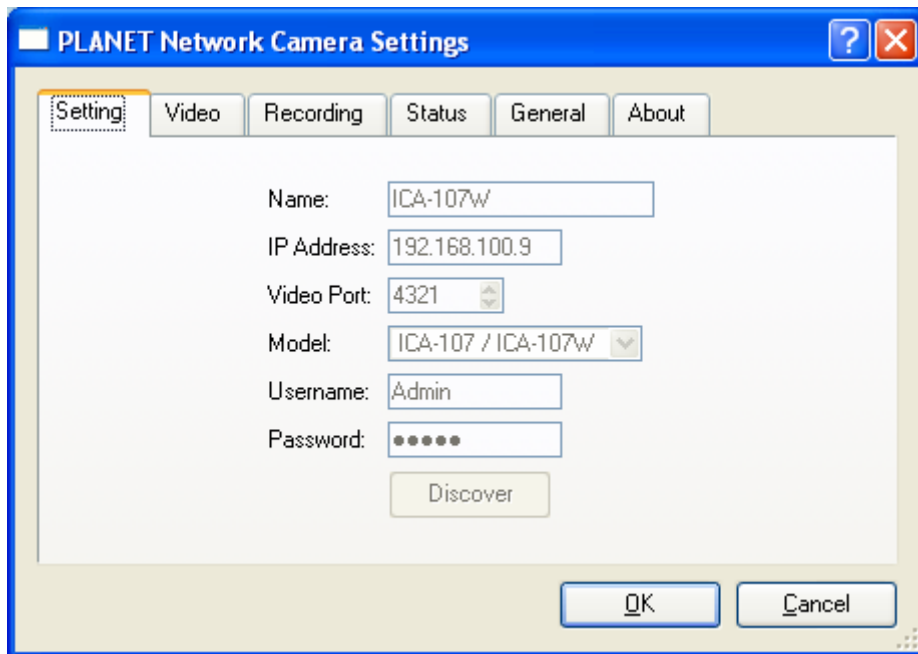
Username: Admin

Password: ●●●●●

Discover

OK Cancel

7.8.1. Setting



Setting

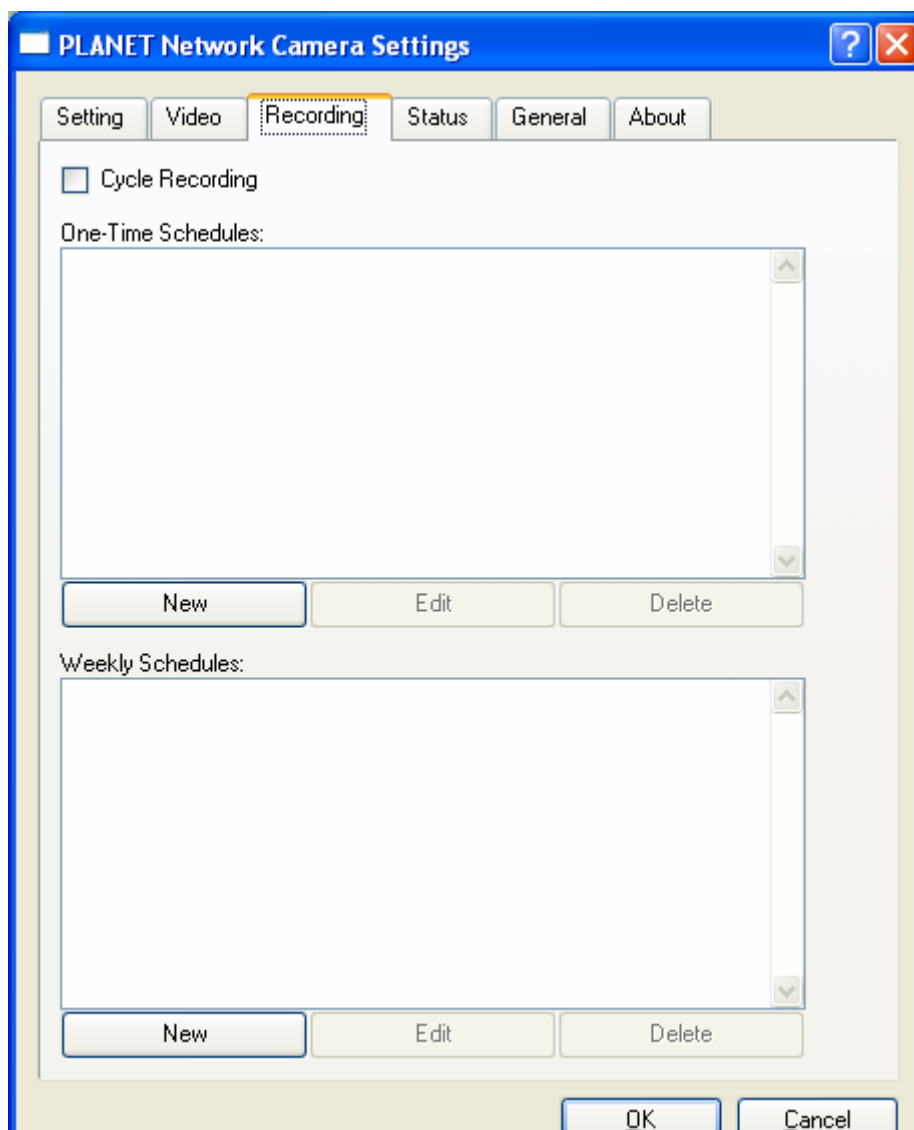
Name	It is not required to fill the name of IP Camera for connecting. It is for users to identify the camera.
IP Address	Enter the IP address of the IP Camera you want to connect here.
Video Port	Enter the port number of the video streaming used by the IP Camera here.
Model	Select the Model Name of the IP Camera.
Username	The user name for login into the IP Camera. By default, the user name is "Admin".
Password	The password for login into the IP Camera. The default value is "Admin".
Discover	Clicking on the "Discover" button, the IP Camera Admin will pop up. The window will show all the discovered cameras on LAN.

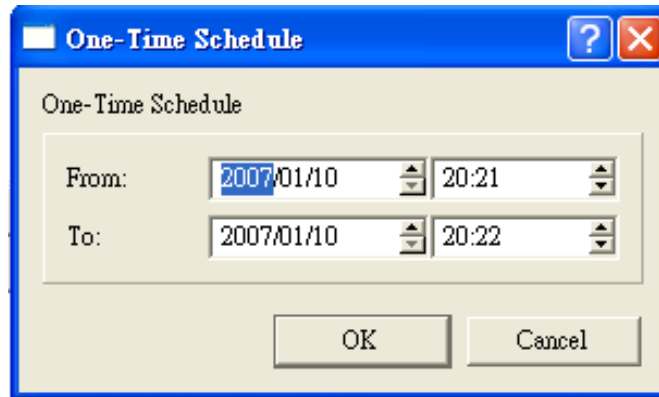
7.8.2. Recording

The IP Camera Viewer support schedule recording function. The IP Camera Viewer will record the video stream in the assigned file folder according to the schedule automatically. The recorded video files are AVI format.

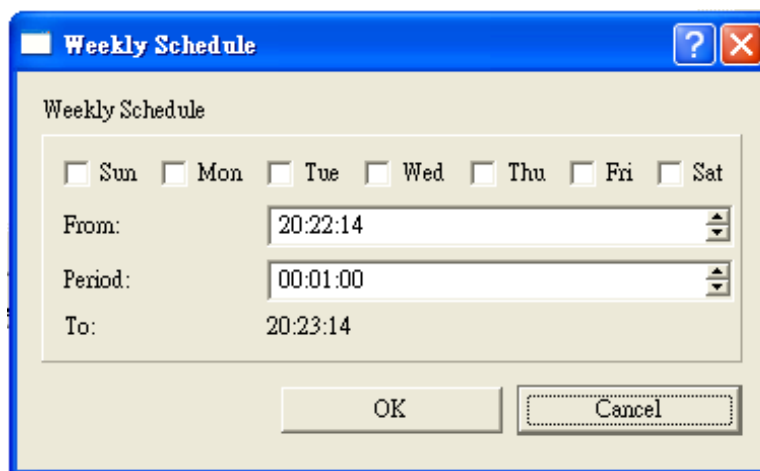
Note:

1. The IP Camera Viewer will only start to record the video stream when it is running and is successfully connecting to the Internet camera in the beginning of the schedule.
2. The schedule setting of one-time or weekly schedule should not overlap, or the recording will fail.





One-Time Schedule



Weekly Schedule

Schedule

New	Click “New” to add a new recording schedule.
Edit	Select an existing schedule in the schedule list and click “Edit” to edit the schedule.
Delete	Select an existing schedule in the schedule list and click “Delete” to delete the schedule.

Schedule

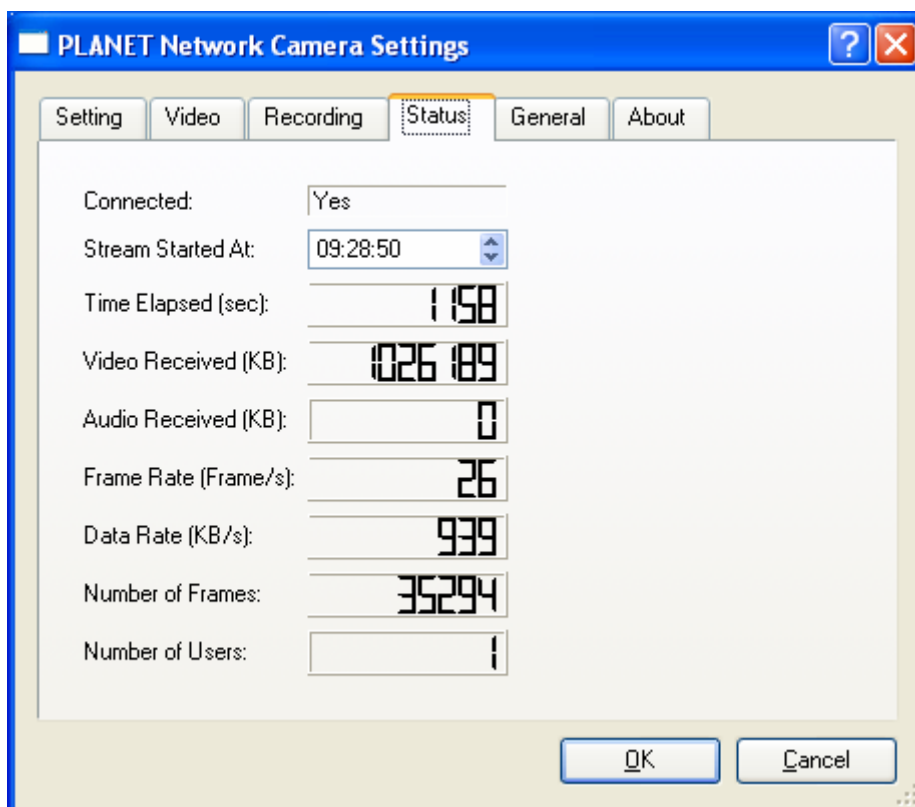
Cycle Recording	Check this check box to enable cycle recording. When the Cycle Recording is checked and the storage usage has already reached the maximum reserved storage space, the IP Camera Viewer will automatically delete the oldest recorded video file and use the space to store the newly recorded video stream.
One-Time Schedule	You can assign a period of time and the IP Camera Viewer will

Weekly Schedule

automatically record the video stream only during the period of time. The default time is 2 minutes later from the current time. You can select the days in a week and set a period of time that you want to record the video stream.

7.8.3. Status

You can see the current status of the connection session between the IP Camera Viewer and the IP Camera.



Status

Connected "Yes": When the IP Camera Viewer is connecting to the IP Camera.
"No": When the utility is not connecting to the IP Camera.

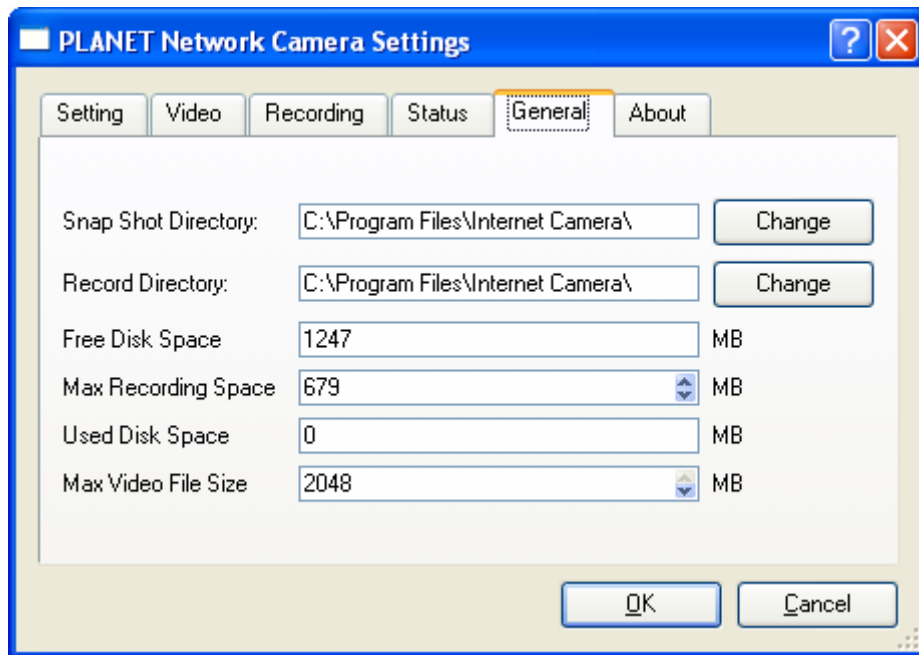
Status

Stream Started At The starting time of the current connection between the IP Camera Viewer and the IP Camera.
Time Elapsed The elapsed time of the current connection between the IP

Video Received	Camera Viewer and the IP Camera. The total size (Unit is KByte) of video stream received from the IP Camera.
Audio Received	(Reserved for future use.)
Frame Rate	The fps (frames per second) of the current video stream.
Data Rate	The data rate (KByte per second) of the current video stream.
Number of Frames	The total number of video frames received during the current connection session between the IP Camera Viewer and the IP Camera.
Number of Users	The total numbers of user that is viewing this camera.

7.8.4. General

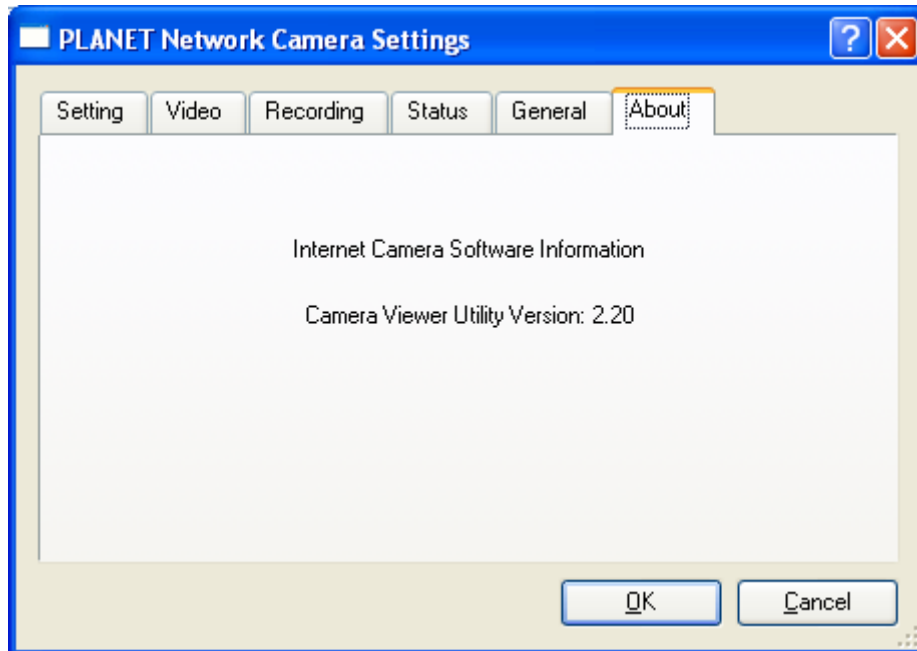
You can manage storage usage for the IP Camera here.



General

Snap Shot Directory	This function lets you assign the directory where snapshot image will be stored. The default folder is where the IP Camera Viewer is installed, for example: "C:\Program Files\Internet Camera".
Record Directory	This function lets you assign the directory where the recorded video files stored. The default folder is where the IP Camera Viewer is installed, for example: "C:\Program Files\Internet Camera".
Free Disk Space	The current free disk space of the hard drive that is assigned to save recording files.
Max Recording Space	You can reserve a disk space to store the recorded video and snapshot files. If the space is run out, a message will pop up to remind you.
Used Disk Space	The current used disk space for saving the recording file.
Max Video File Size	This function let you assign a maximum size of each video file. The max value is 2 GB per file.

7.8.5. About

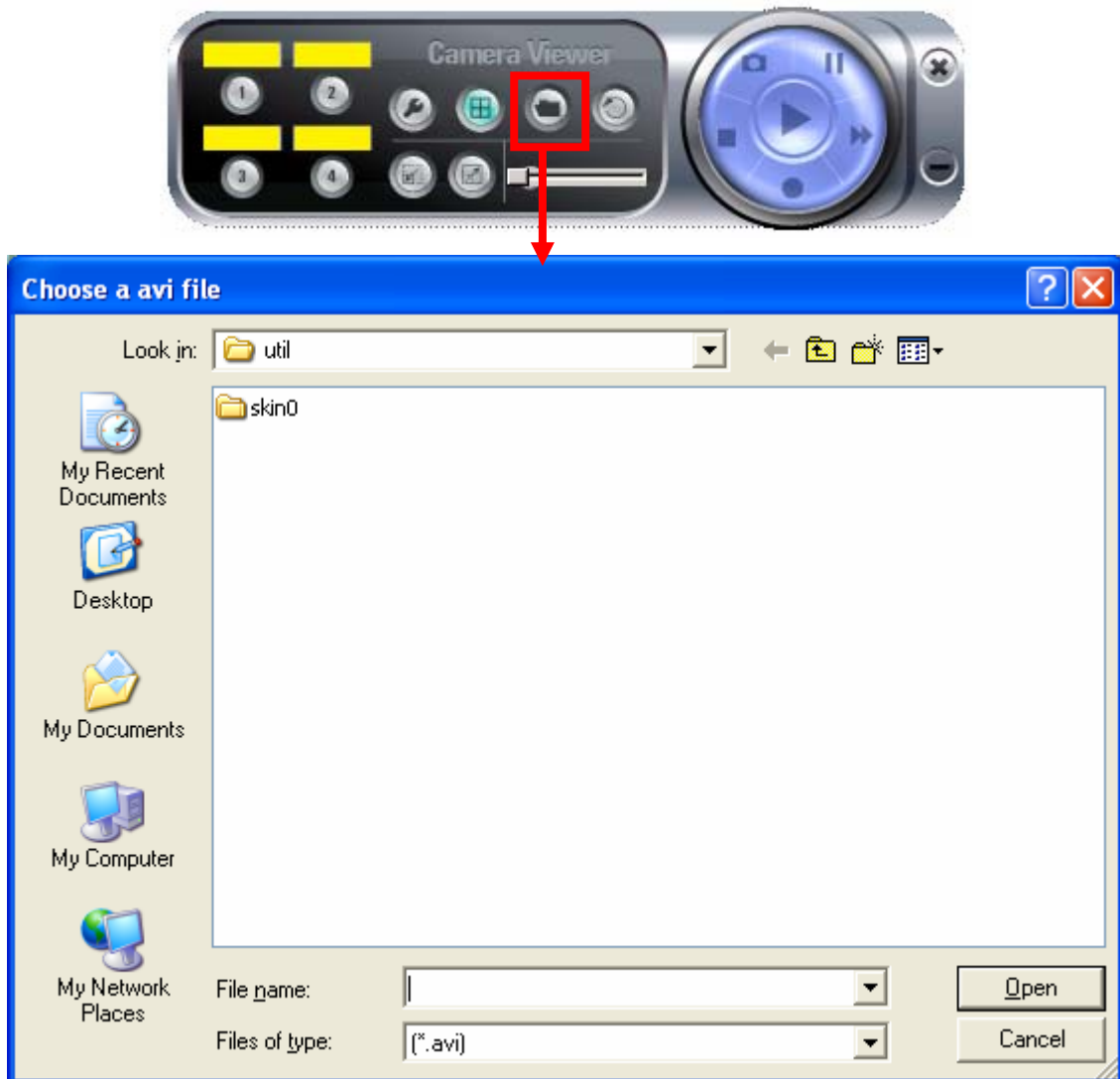


About

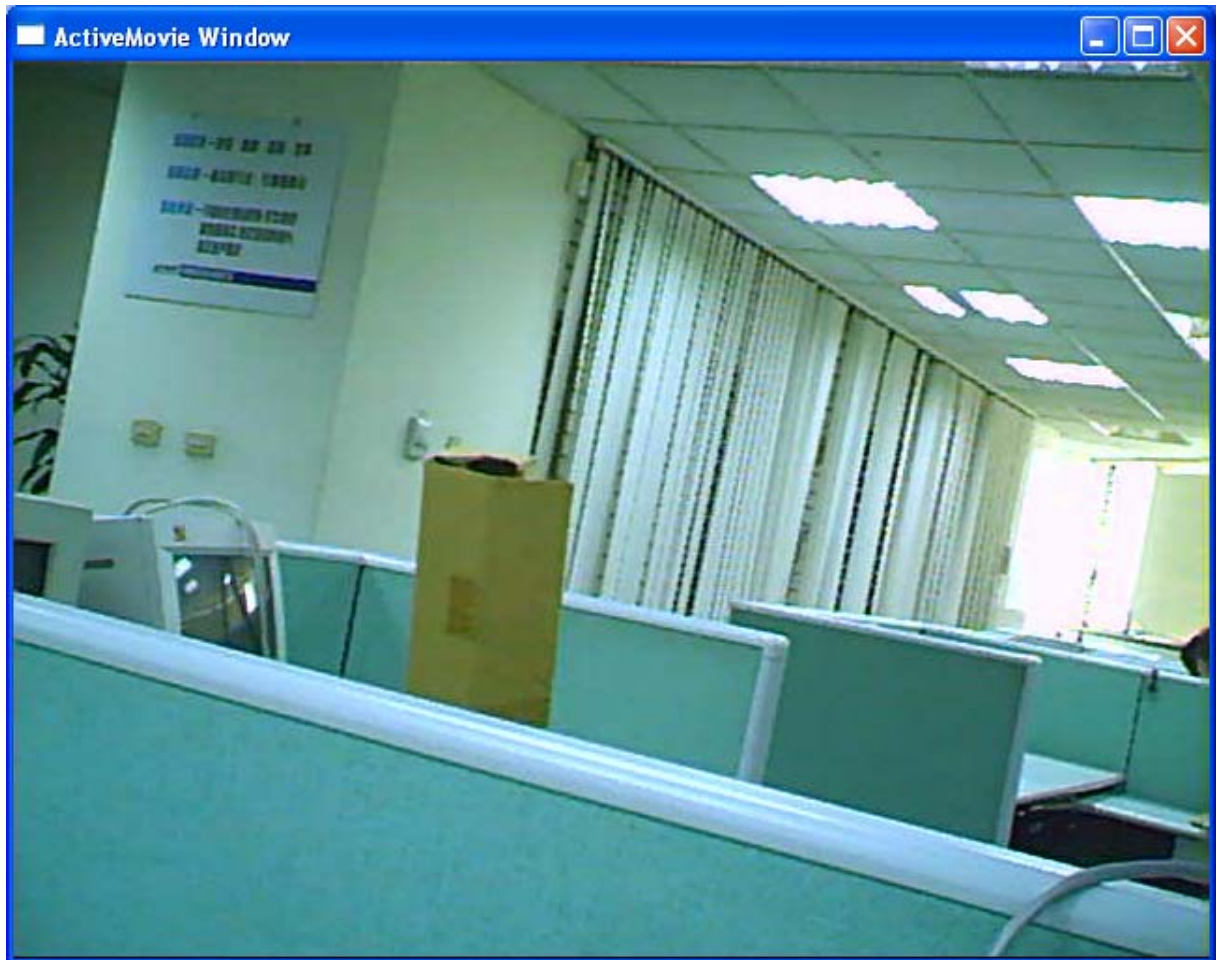
Camera Viewer Utility Display current version of IP Camera Viewer.
Version

7.9. Playback

Click the “Open File” and the “Load File” window will be popped up. Select the file that you want to play.



The IP Camera Viewer will start to play the selected video file.



Playing Control

Play



When the video playback is in Stop state, click on the "Play" button and the IP Camera Viewer will play the video file from the beginning point. When the video playback is in Pause state, click on the "Play" button and the IP Camera Viewer will play the video file from the current pause point. When the IP Camera Viewer is playing with fast speed, just click "Play" button to let the IP Camera Viewer play with the normal speed.

Pause

When the recorded video is playing, you can click the "Pause" button to freeze the playback. If you want the IP Camera Viewer



Stop



to continue playing from the current pause point, just click “Play”.

When the IP Camera Viewer is playing, you can click “Stop” to stop the playback. If you want the IP Camera Viewer to play again, just click “Play” and the IP Camera Viewer will play the video file from the beginning point.

Playing Control

Forward



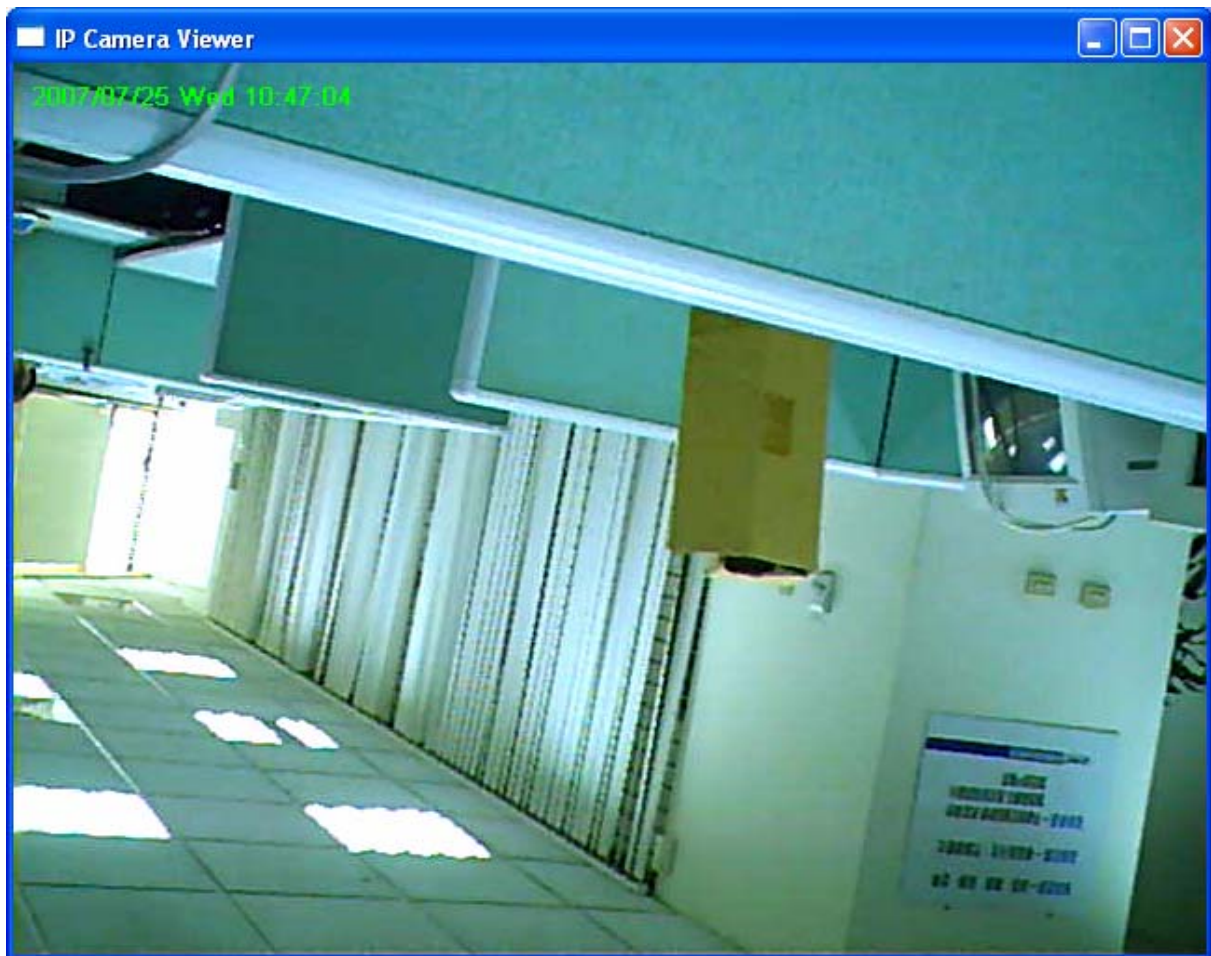
If you want the IP Camera Viewer to play the video file in a faster speed, just click “Forward” and the IP Camera Viewer will double the playing speed. If you want the IP Camera Viewer play with the normal speed, just click “Play”.

7.10. Rotate Video

Rotate function lets you rotate the video frame 180 of degree each time you click the “Rotate”



. With this function, you can view the live video with normal position or rotate with 180 degree.



8. Web Connection and Setup

You can use the Web browser to connect the IP Camera for viewing or setting. Open the web browser and enter the IP address of the IP Camera to establish a connection. The default IP address of the camera is “**192.168.0.20**”.

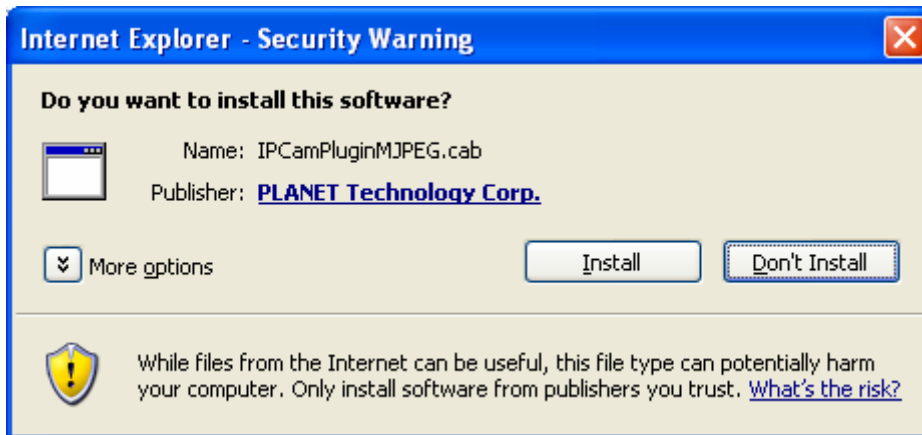
When the welcome screen appears, enter the “Administrator Name” and “Password”. The default values are:

Administrator Name: “**Admin**”

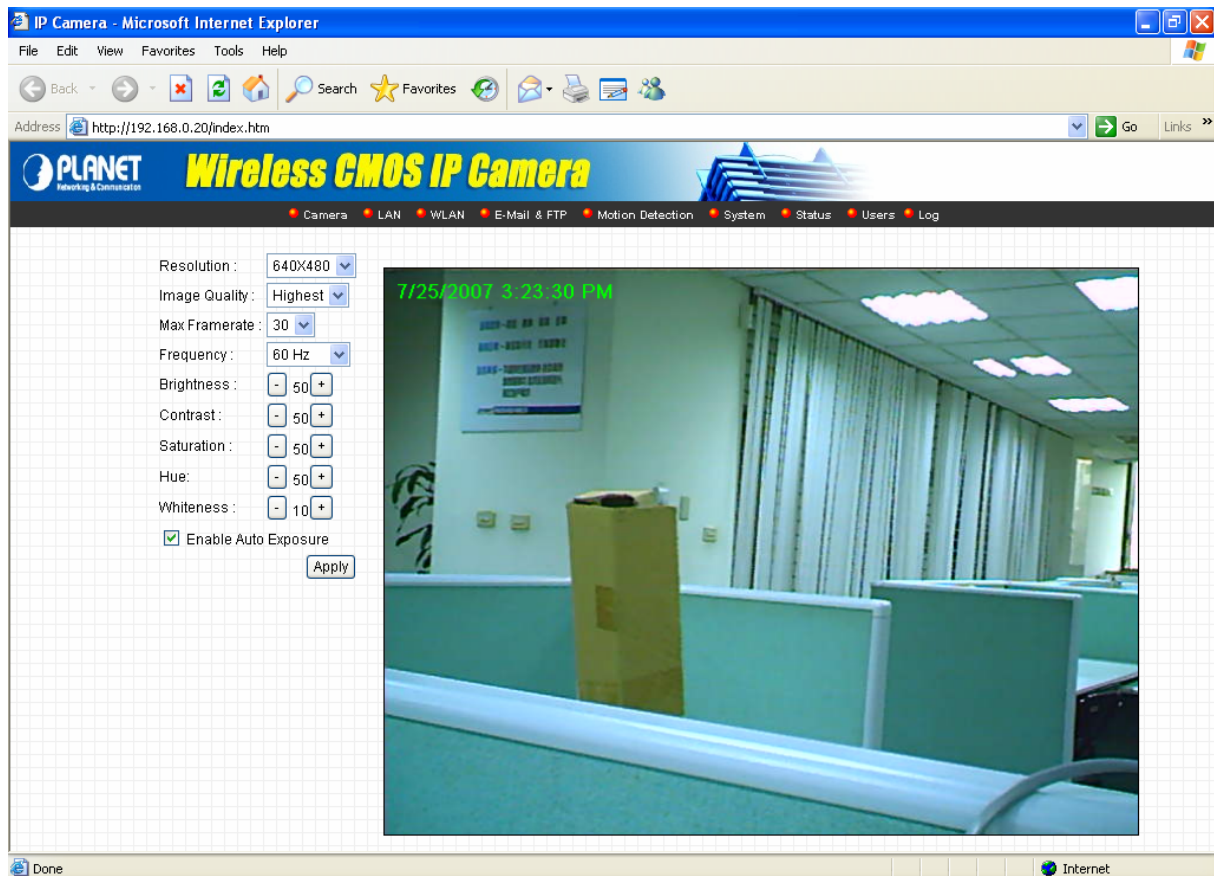
Password: “**Admin**”



When the IP Camera is connected, the browser will take you to the live video page. If you are viewing the IP Camera at the first time, the following dialog will appear to install the ActiveX plug in. Please check the publisher part; you should accept it, if it is published by PLANET Technology Corp.



After installed the ActiveX plug-in, the video image will be shown up in the web screen directly.



(Example on ICA-107W)

The menu options for the web control screen are as follows.

Camera – View live video and adjust the video format from the menu.

LAN – Configure the LAN port.

WLAN – Configure the WLAN port. (ICA-107W Only)

E-Mail & FTP – Setup the E-Mail client and FTP client.

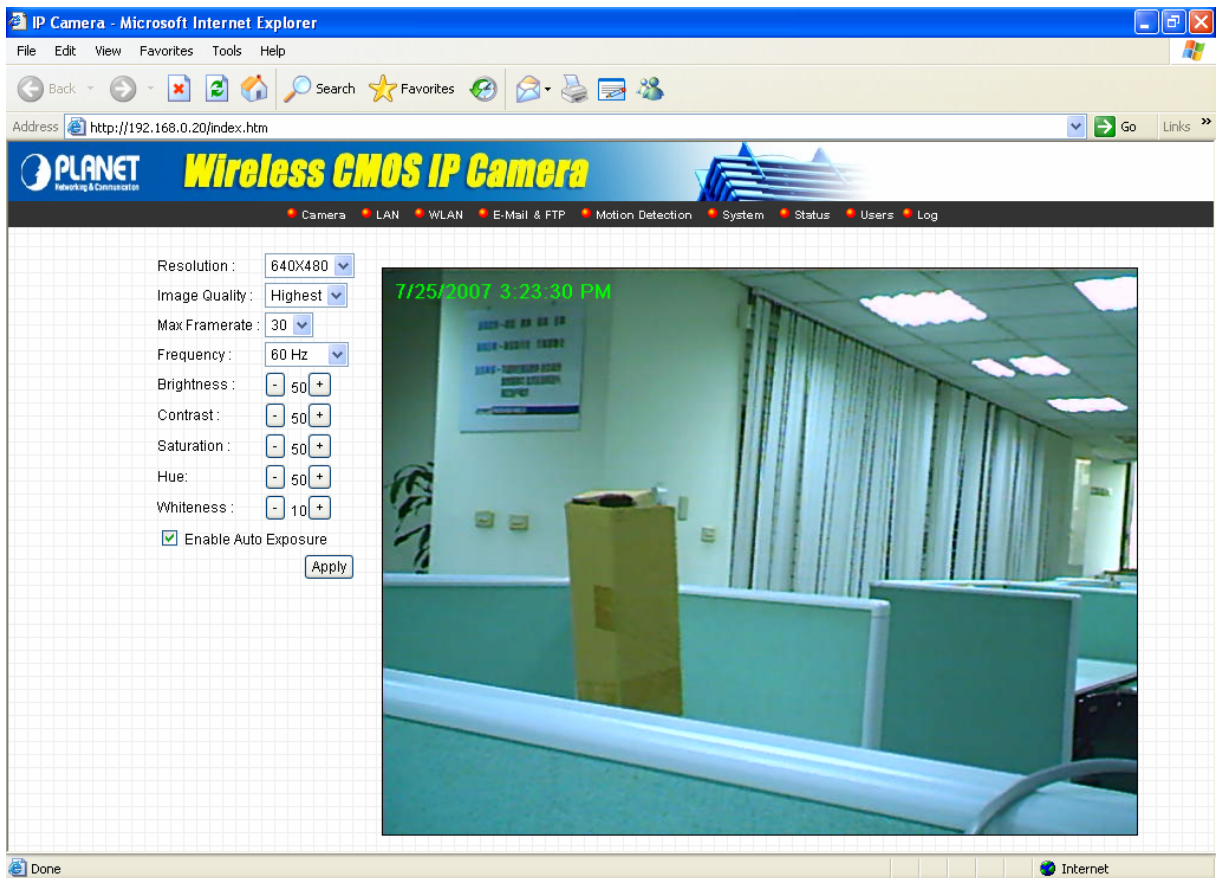
Motion Detection – Configure the Motion Detection here.

System – Configure the system settings here.

Status – Shows the camera information and current status in this page.

Users – The IP Camera support up to 4 user accounts. You can set those accounts here.

8.1. Camera Setting



(Example on ICA-107W)

Camera Setting

Resolution	Select the desired video resolution. Available resolutions are: 640 x 480, 320 x 240, and 176 x 144. The default resolution is CIF.
Image Quality	Adjust the video quality here.
Max Frame Rate	Set the video max frame rate. This camera can support at most 30 frames per second.
Frequency	Adjust this property to fitting light frequency.
Brightness	You can adjust the brightness of the video. This value can be from 1 to 100.
Contrast	You can adjust the contrast by change this value. This value can be from 1 to 100.
Saturation	You can adjust the saturation by change this value. This value can be from 1 to 100.
Hue	You can adjust the hue by change this value. This value can be

	from 1 to 100.
Whiteness	You can adjust the white balance by change this value. This value can be from 10 to 30.
Enable Auto Exposure	You can enable Auto Exposure by check this box. IF this function is enabled, the Brightness, Contrast, Saturation, Hue and Whiteness adjustment would not take effect.
Apply	When you finish the setting, click this button to validate the setting values.

8.2. LAN Setting

The screenshot shows the web interface of a Planet Wireless CMOS IP Camera. The browser window is titled "IP Camera - Microsoft Internet Explorer" and the address bar shows "http://192.168.0.20/index.htm". The page has a blue header with the Planet logo and the text "Wireless CMOS IP Camera". Below the header is a navigation menu with links for Camera, LAN, WLAN, E-Mail & FTP, Motion Detection, System, Status, Users, and Log. The main content area is divided into four sections, each with an "Apply" button:

- LAN:** Network Type: DHCP Static IP Address. IP Address: 192.168.0.20. Subnet Mask: 255.255.255.0. Gateway: 192.168.0.254. Primary DNS: 168.95.1.1. Secondary DNS: (empty). Video Port: 4321. HTTP Port: 80.
- PPPoE:** Enable PPPoE: Enable Disable. User Name: (empty). Password: (empty). MTU: 1392 (512<=MTU Value<=1492).
- Dynamic DNS:** Enable DDNS: Enable Disable. Provider: dyndns.org. Host Name: ddns-host. User Name: ddns-account. Password: (masked).
- UPnP:** Enable UPnP: Enable Disable.

(Example on ICA-107W)

LAN

Network Type	The IP Camera can obtain IP via DHCP protocol or specified a static IP Address to it.
IP Address	Enter an available IP Address within the range in your LAN.
Subnet Mask	The Subnet Mask field must match the subnet setting on your LAN. For example: 255.255.255.0.
Gateway	Please enter the default gateway of your LAN here.
DNS Server	Please enter your prefer DNS server here.
Video Port	The Video Port is used to transmit or receive the video stream. The default port setting is "4321". If you want to view the video from the camera, the port setting should be correct.

Web Port	The IP Camera support web connection, the default web port is 80. If you change the web port from 80 to other port, such as 8080, you must type http://192.168.0.20:8080 to connect the camera through the web browser.
Apply	When you finish the “LAN” configuration, click “Apply” to apply the setting.

PPPoE

Enable PPPoE	Enable or disable PPPoE function of the IP Camera.
User Name	Enter the User Name for the PPPoE account.
Password	Enter the Password for the PPPoE account.
MTU	Maximum Transmission Unit (MTU) is the largest frame that could be transmitted through the PPPoE connection. The MTU is specified in octets (eight-bit bytes). If there is no other request, please leave it as default value.
Apply	When you finish the “PPPoE” configuration, click “Apply” to apply the setting.

Dynamic DNS

Enable DDNS	Enable or disable DDNS function of the camera.
Provider	Several companies provide DDNS service. The IP Camera supports the service from DynDNS company.
Domain Name	The domain name given by DynDNS is “registername.dyndns.com”. Enter the domain name that you register for the camera from DynDNS web site.
User Name	Enter the login name for the DDNS service.
Password	Enter the password for the DDNS service.
Apply	When you finish the “Dynamic DNS” configuration, click “Apply” to apply the setting.

UPnP

Enable UPnP	Enable or disable UPnP function of the camera.
Apply	When you finish the “UPnP” configuration, click “Apply” to apply the setting.

8.3. WLAN (ICA-107W Only)

Wireless LAN

• Wireless Connection : Enable Disable

• Network Type : Infrastructure

• Available Networks :

Connect	SSID	MAC Address	Signal	Channel	Encryption	Network Type
<input type="radio"/>	8F	00:30:4F:04:1E:03	66	1	WEP	Infrastructure
<input type="radio"/>	11F	00:30:4F:43:4A:68	100	1	Unknown(TKIP)	Infrastructure
<input type="radio"/>	10F	00:30:4F:1F:74:55	100	3	WEP	Infrastructure
<input type="radio"/>	9F	00:30:4F:09:AD:B0	62	3	WEP	Infrastructure
<input type="radio"/>	12F	00:30:4F:1D:4A:C7	64	6	Disabled	Infrastructure
<input type="radio"/>	7F	00:30:4F:43:29:71	92	11	Unknown(AES)	Infrastructure

• SSID : any

• Channel : 11

• Basic Rate : Auto

• Authentication : None

• Encryption Type : None

• WPA Pre-Shared Key :

• WEP Key Length : 64-Bit

• WEP Key Format : HEX

• Default Key : 1

• WEP Key 1 :

• WEP Key 2 :

• WEP Key 3 :

• WEP Key 4 :

(Example on ICA-107W)

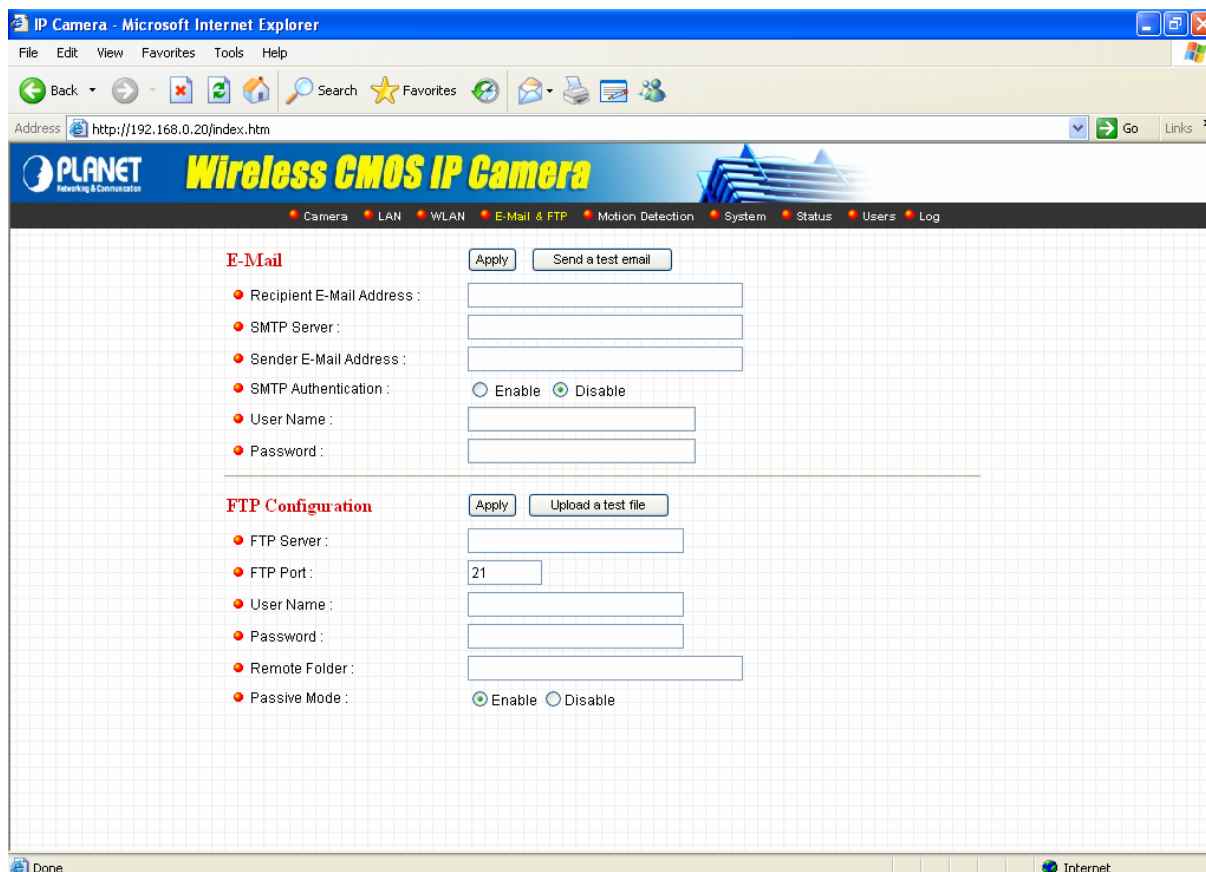
Wireless Setting

- Wireless connection** Enable or disable the wireless function of the IP Camera. By default, the function is disabled.
- Network Type** Infrastructure – This operation mode requires the presence of a Wireless LAN Access Point or Router. All communication is done via the Access Point or Router.
Ad-Hoc – Select this mode if you want to connect to another wireless stations in the Wireless LAN network without through an Access Point or Router.
- Available Networks** Select the networks listed below and click apply to connect to the specified network.

SSID	The SSID (up to 32 printable ASCII characters) is the unique name identified in a WLAN. The ID prevents the unintentional merging of two co-located WLANs. You may specify a SSID for the IP Camera and then only the device with the same SSID can interconnect to the IP Camera.
Channel	This setting is only available for Ad Hoc mode. Select the number of the radio channel used for the networking.
Basic Rate	The IP Camera will force to the data rate that you selected to transmit data.
Authentication and Encryption Type	Choose the security setting of your wireless network. The ICA-107W supports: "None", "Open System", "Shared Key" and "WPA-PSK". When you select "WPA-PSK" authentication, you can encryption your wireless with WPA-TKIP or WPA-AES.
WPA Pre-Shared Key	The WPA-PSK key can be from 8 to 64 characters and can be letters or numbers. This same key must be used on all of the node in the wireless network.
WEP Key Length	You may select 64-bit or 128-bit to encrypt transmitted data. Larger key length will provide higher level of security, but the throughput will be lower.
WEP Key Format	Hexdecimal – Only "A-F", "a-f" and "0-9" are allowed to be set as WEP key. ASCII – Numerical values, characters or signs are allowed to be WEP key. It is more recognizable for user.
Default Key	Select one of the keys (1~4) as the encryption key.
Key1 ~ Key4	Enter the WEP key you want to use here.
Apply	When you finish "WLAN" configuration, click this button to apply the setting.

8.4. E-Mail and FTP

The “E-Mail & FTP” lets you setup E-Mail client and FTP client that camera can sent image to your e-mail account or FTP server when Motion has been detected.



The screenshot shows a web browser window titled "IP Camera - Microsoft Internet Explorer" displaying the configuration page for a "Wireless CMOS IP Camera". The page has a navigation menu with options: Camera, LAN, WLAN, E-Mail & FTP (selected), Motion Detection, System, Status, Users, and Log. The "E-Mail" section includes fields for Recipient E-Mail Address, SMTP Server, Sender E-Mail Address, SMTP Authentication (radio buttons for Enable and Disable, with Disable selected), User Name, and Password. There are "Apply" and "Send a test email" buttons. The "FTP Configuration" section includes fields for FTP Server, FTP Port (set to 21), User Name, Password, Remote Folder, and Passive Mode (radio buttons for Enable and Disable, with Enable selected). There are "Apply" and "Upload a test file" buttons. The status bar at the bottom shows "Done" and "Internet".

(Example on ICA-107W)

Email & FTP

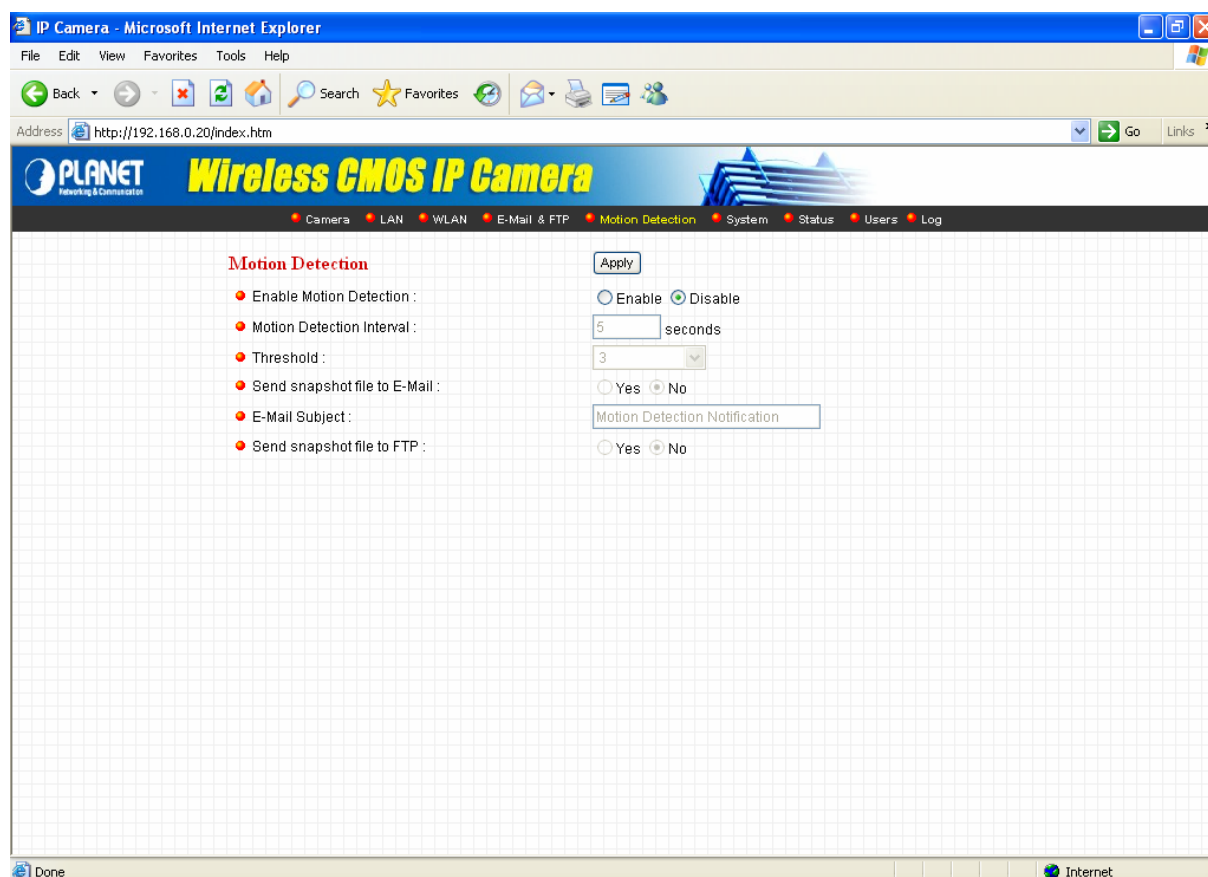
Recipient E-Mail Address	The IP Camera supports “Motion Detection” function. Enter the E-Mail Account for receiving the alert mail.
SMTP Server	Enter the SMTP Server for sending the E-Mail.
Sender E-Mail Address	Specified the e-mail address of the e-mail sender.
SMTP Authentication	Enable or Disable the SMTP Authentication function
Username	When Authentication is enabled, please input the SMTP Username here.
Password	When Authentication is enabled, please input the account password here.
Send a Test Email	Press this button to send a test e-mail. You can use this function

to test if your setting is correct.

FTP Server	The IP Camera supports “Motion Detection” function. When Motion Detection event occurred, you can record the pictures to FTP server. Enter the FTP address for uploading the pictures.
FTP Port	Enter the FTP port that the FTP server uses.
User Name	Specify the user account of ftp server.
Password	Specify the password of your ftp account.
Remote Folder	Specify the folder of the ftp site that you want to store the image.
Password	When Authentication is enabled, input the account password.
Passive Mode	If your IP Camera is behind the NAT, you usually need to enable this feature.

8.5. Motion Detection

The “Motion Detection” allows users to setup the behavior of motion detection feature.



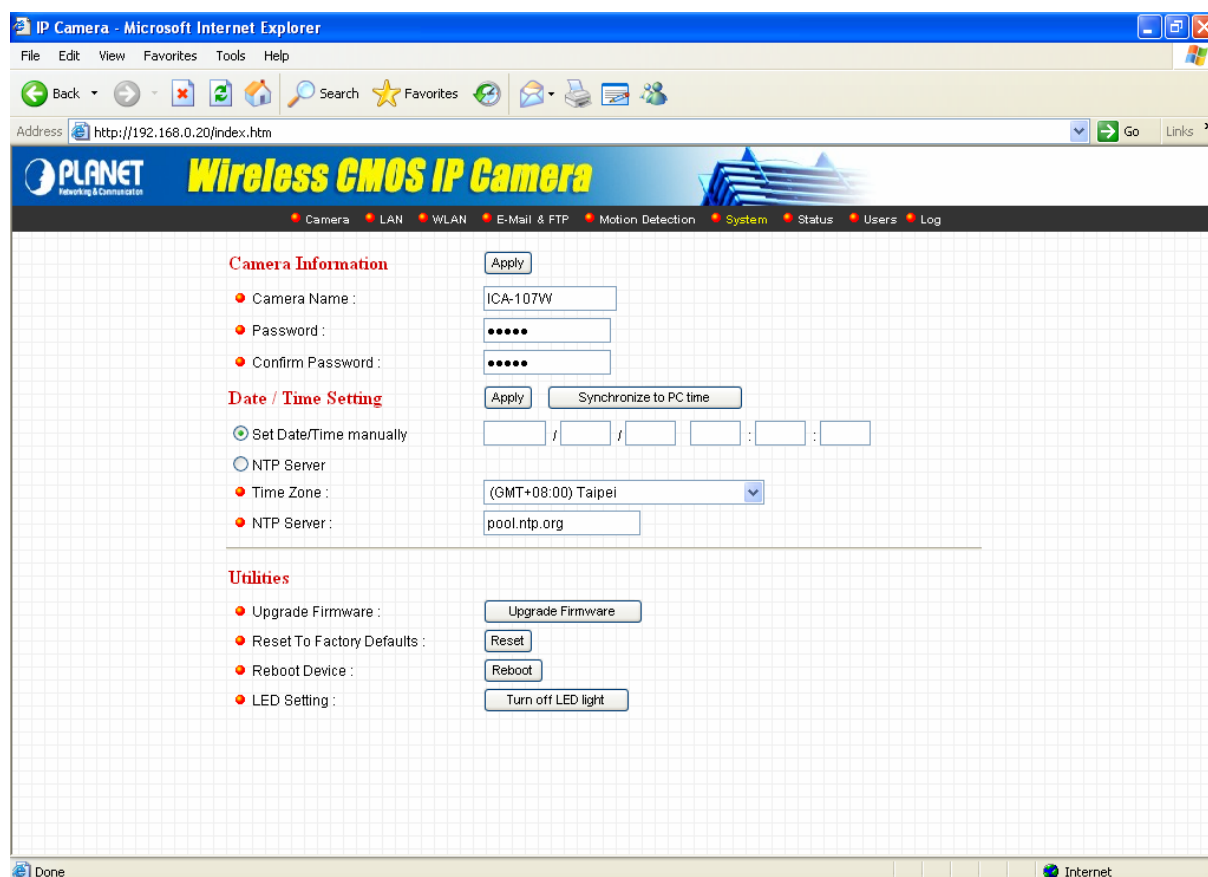
(Example on ICA-107W)

Motion Detection

Motion Detection Enable	Enable or Disable the Motion Detection Function.
Next Event Detected Interval	Setup the interval between two events. For example, if you setup the interval to 5 seconds, the next event will start after this event finished + 5 seconds.
Threshold	Setup the sensitivity of motion detection.
Send Recording File to E-Mail	Select “Yes” to send the alert email with the recorded image to the e-mail account that you had specified in the “E-Mail & FTP” page.
E-Mail Subject	Specify the subject of motion detection alert e-mail.
Send snapshot file to FTP	Select “Yes” to send the recorded video file to your FTP server that you had specified in the “E-Mail & FTP” page.

8.6. System

The “System” allows users to setup the IP Camera’s parameters, like camera name, data/time setting. And also provide firmware upgrade and reset tools at this page.



(Example on ICA-107W)

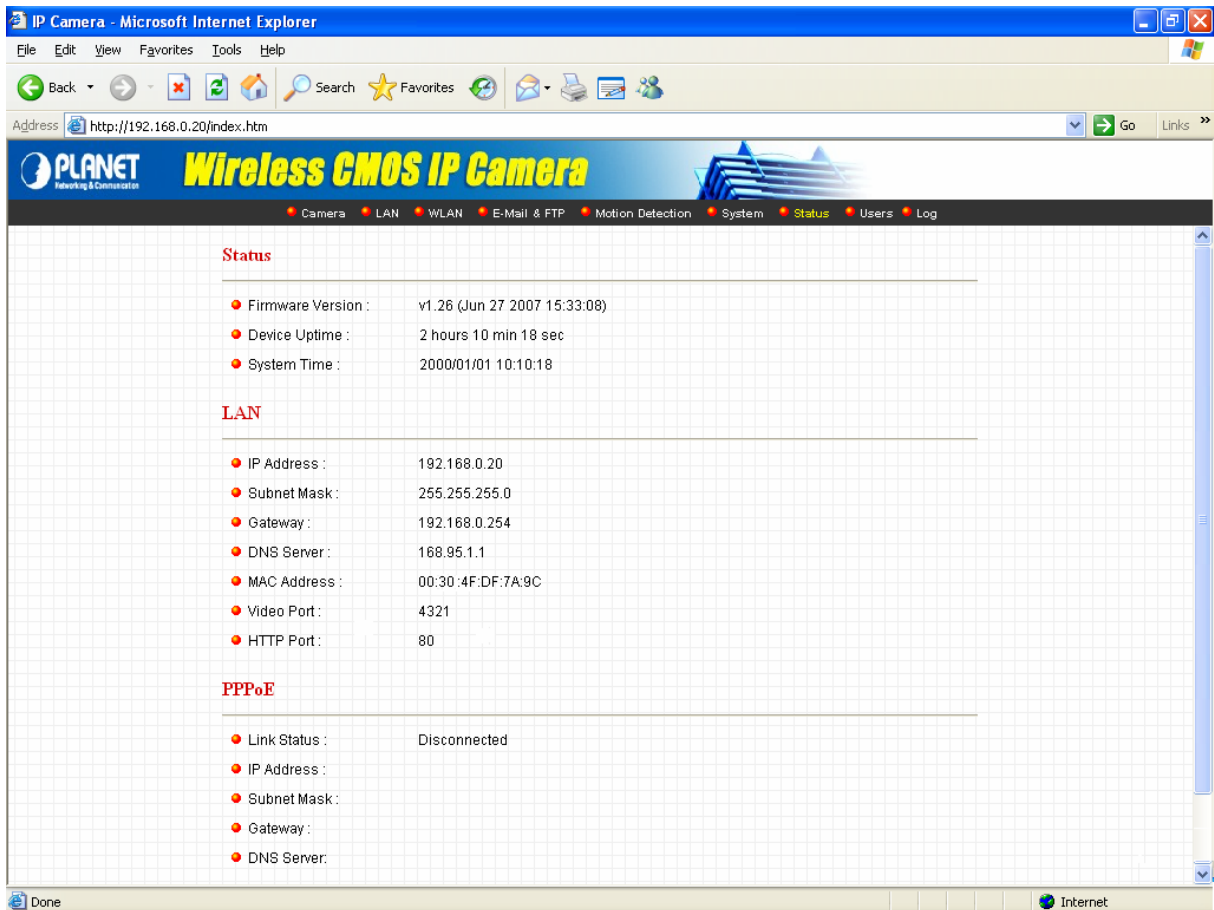
System

Camera Name	The default camera name is “ICA-107(W / P)”. It is recommended to name a meaningful name for the IP Camera.
Password	Enter the password for the default account. The password should be 4 digits.
Confirm Password	Enter the password again to confirm the setting.
Set Date/Time manually and Synchronize to PC time	You can set the IP Camera’s Date/Time manually. Or you can just click on the Synchronize to PC time to let the IP Camera synchronize its time to your PC automatically.
NTP Server (Radio Box)	To enable the NTP function.
Time Zone	Select the time zone where your camera is located.
NTP Server	Specify the IP Address of the NTP Server here.

Upgrade Firmware	You can upgrade the IP Camera's firmware via this function. Press the browse button, find the correct firmware and press upgrade.
Reset to Factory Defaults	If you want to reset all the settings to factory default, please use this function to fulfill your task.
Reboot Device	To reboot the IP Camera, click "Reboot".
LED Setting	If you want to secure the IP Camera from noticing, you can turn off the LED light by clicking "LED Light OFF". To turn on the LED light, just click "LED Light ON".

8.7. Status

The “Status” shows the current firmware version, uptime, system time and IP information of this camera.



The screenshot shows a Microsoft Internet Explorer browser window displaying the web interface of a Planet Wireless CMOS IP Camera. The address bar shows the URL `http://192.168.0.20/index.htm`. The page title is "IP Camera - Microsoft Internet Explorer". The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The address bar also contains Back, Forward, Stop, Refresh, Home, Search, Favorites, and Go buttons. The main content area features a navigation menu with links for Camera, LAN, WLAN, E-Mail & FTP, Motion Detection, System, Status (highlighted), Users, and Log. The Status page displays the following information:

- Status**
 - Firmware Version : v1.26 (Jun 27 2007 15:33:08)
 - Device Uptime : 2 hours 10 min 18 sec
 - System Time : 2000/01/01 10:10:18
- LAN**
 - IP Address : 192.168.0.20
 - Subnet Mask : 255.255.255.0
 - Gateway : 192.168.0.254
 - DNS Server : 168.95.1.1
 - MAC Address : 00:30:4F:DF:7A:9C
 - Video Port : 4321
 - HTTP Port : 80
- PPPoE**
 - Link Status : Disconnected
 - IP Address :
 - Subnet Mask :
 - Gateway :
 - DNS Server :

The browser's status bar at the bottom shows "Done" and "Internet".

(Example on ICA-107W)

8.8. Users

The “Users” allows you to add four user accounts which are able to view video from the IP Camera Viewer and Web Management. These users, unlike Administrator, are not allowed to configure the IP Camera.

The screenshot shows a web browser window titled "IP Camera - Microsoft Internet Explorer" displaying the "Users" configuration page for a "Wireless CMOS IP Camera". The page has a navigation menu with options: Camera, LAN, WLAN, E-Mail & FTP, Motion Detection, System, Status, Users (selected), and Log. The main content area is titled "Users" and contains four identical user configuration sections, labeled "User 1" through "User 4". Each section includes a radio button to "Enable" or "Disable" the user (currently set to "Disable"), a text box for "Login", text boxes for "Password" and "Confirm password", and an "Apply" button. The browser's address bar shows "http://192.168.0.20/index.htm".

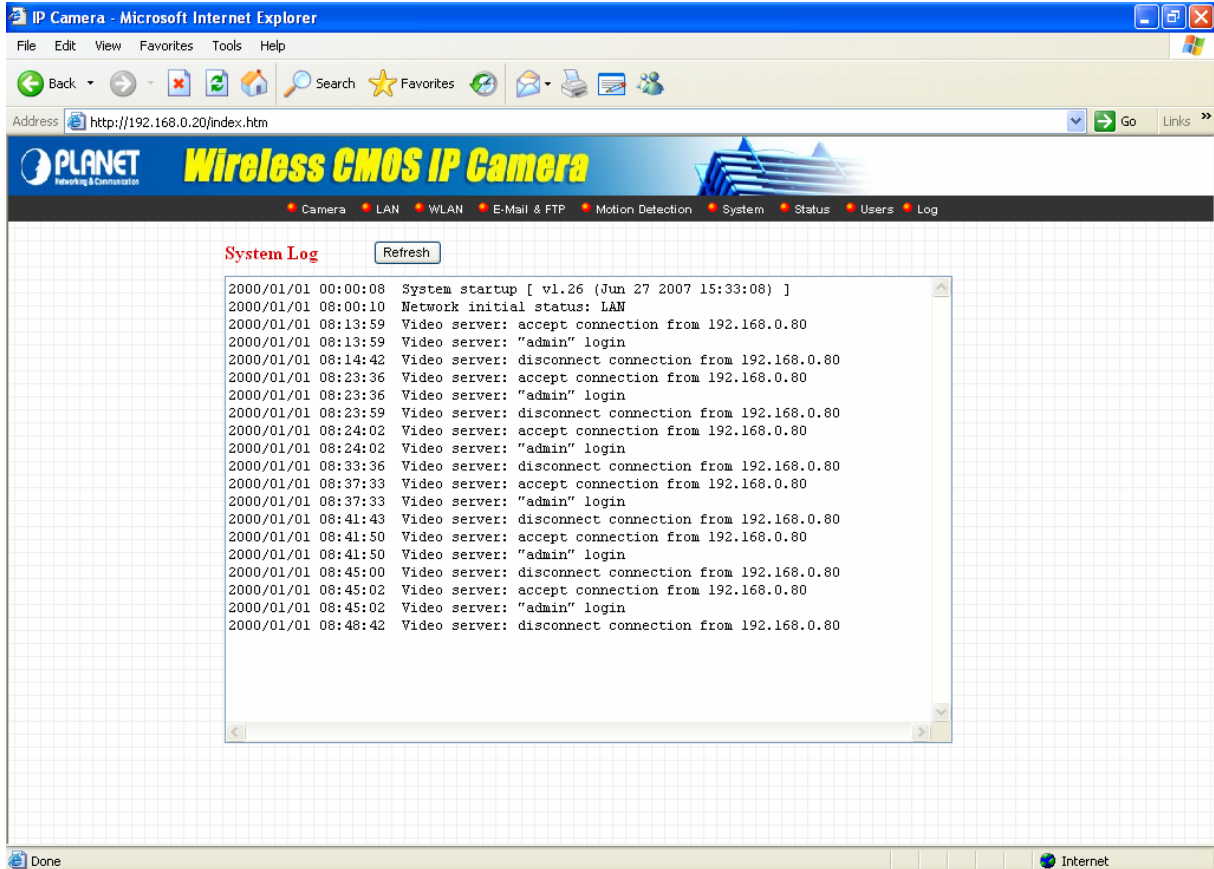
(Example on ICA-107W)

User 1 / 2 / 3 / 4

User #	Enable or Disable the user number #.
Login	Enter the login name of the user account.
Password	Enter up to 4 digits password for the new user account.
Confirm Password	Enter the password again to confirm the setting.
Apply	Click “Apply” to save the user account setting.

8.9. Log

The “Log” allows users to monitor the device event and time. If you have trouble to use this device, the log file will help administrator to know the status of device.



(Example on ICA-107W)

Log

Log screen

The screen will show event and event time of device.

Refresh

You can press “Refresh” button to refresh the log screen.

9. Technical Specifications

■ Video specification

Max Resolution: 640 x 480 pixels

Sensor: 300K pixels 1/4" color CMOS sensor

Gain control: Automatic

Exposure: Automatic

White Balance: Automatic

Lens: Manual Focus, F=1.8

■ Image (Video Setting)

Image compression: MJPEG Image Video

Digital 24-bit Color

Frame rate: Up to 30fps

Video resolution: 176 x 144, 320x240, 640x480

■ System Hardware

LAN Connector: One RJ-45 port to connect to 10/100Mbps Ethernet

Wireless: IEEE 802.11b/g(ICA-107W Only)

PoE: 802.3af(ICA-107P Only)

LED Indicator: LAN LED, WLAN LED (ICA-107W Only), Power LED

Power Supply: 12V / 1A (ICA-107W)

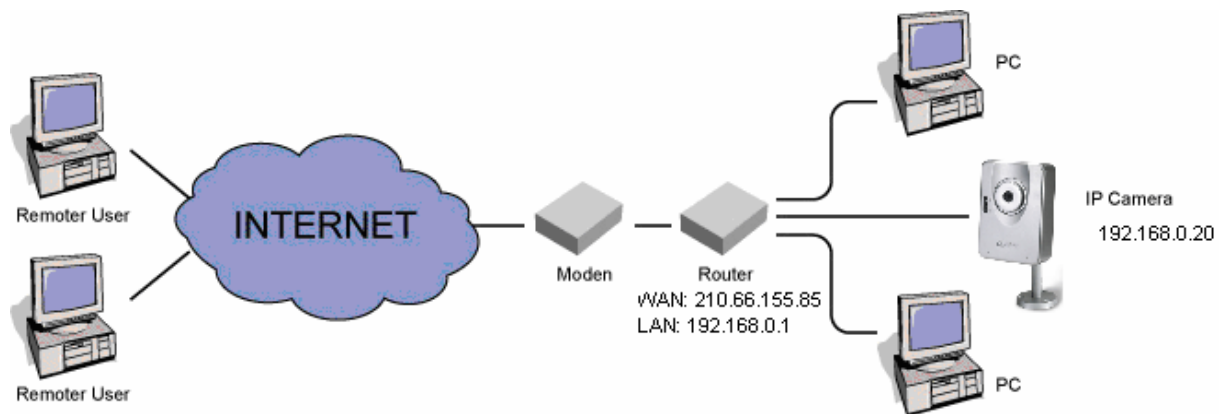
Power Supply: 12V / 0.4A (ICA-107 / ICA-107P)

■ EMI & Safety

FCC, CE!

10. Appendix A Router/Gateway Setup for Internet Viewing

To view IP Camera across the Internet, you have to make sure Router/Gateway has configured to pass incoming TCP/UDP connections from remote PC to the IP Camera. The Router/Gateway should set port forwarding or virtual server for the connections. Please see the illustration as below.



Router/Gateway Port Forwarding/Virtual Server Setup

Name	Protocol	Port	LAN IP
Setup 1	TCP	80	192.168.0.20
Setup 2	TCP	4321	192.168.0.20

Port Definition

Setup 1 It is the port of Web port. You have to configure the protocol to "TCP".

Setup 2 It is the port of Video port. You have to configure the protocol to "TCP".

Viewing Internet Camera via Web Browser

Setup 1/Setup 2 If you want to view the video via Web Browser from Internet, you have to ensure the Router/Gateway has configured both setup1 and setup 2. If the web port is not default port "80", but changed to 8080. The remote user has to enter `http://210.66.155.85:8080`. Without Setup 2, you will not see the video streaming in this PC.

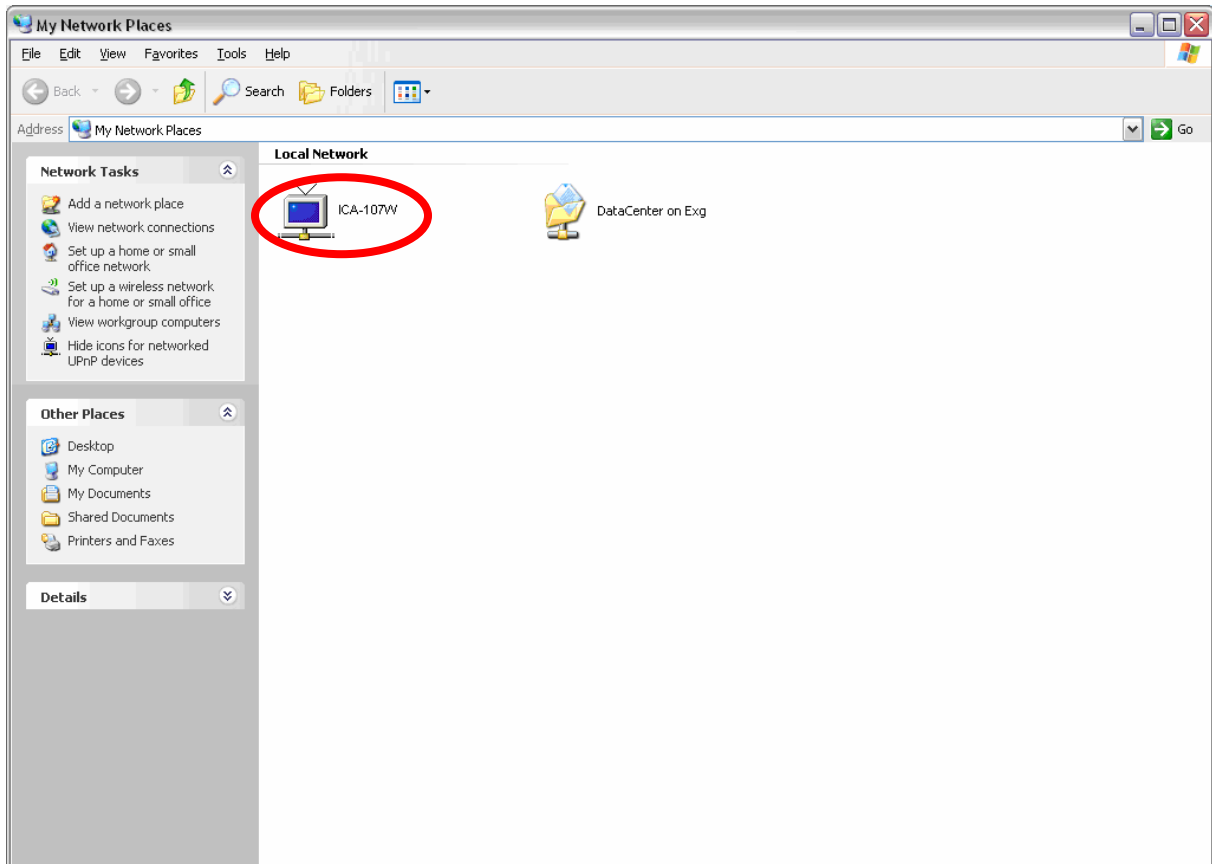
Viewing Internet Camera via Camera Viewer Utility

Setup 2 If you want to use IP Camera Viewer Utility to view the camera from Internet, please make sure the Router/Gateway has

configured Setup2.

11. Appendix B Viewing via UPnP in Windows XP

When the UPnP function is enabled, the camera can be detected by UPnP compliant system such as Windows XP. The camera will be displayed in My Network Place, so you can double click the camera or right click the camera and select “Invoke” to view the video through web browser.



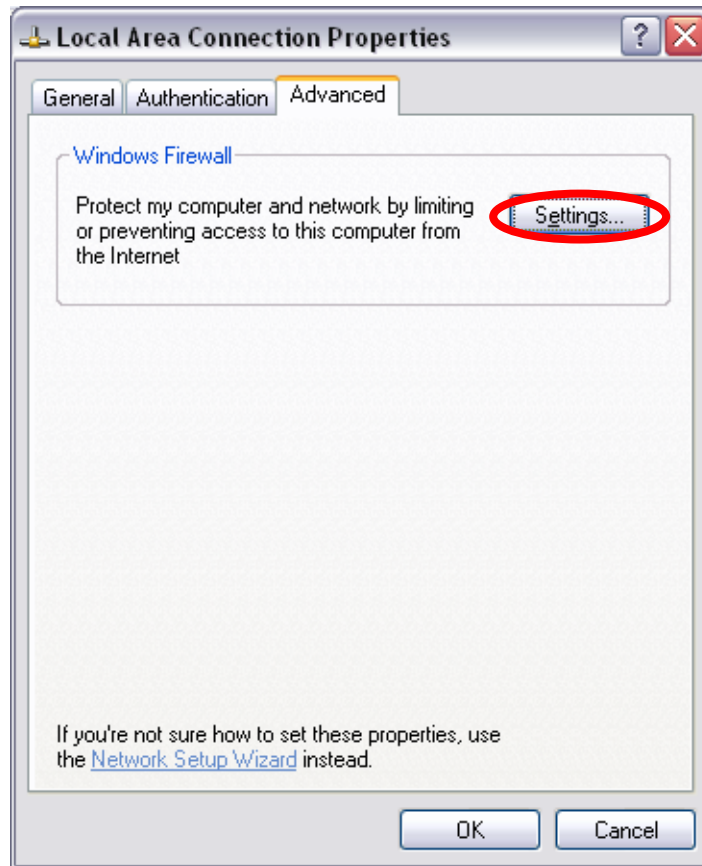


Enable UPnP in Windows XP SP2

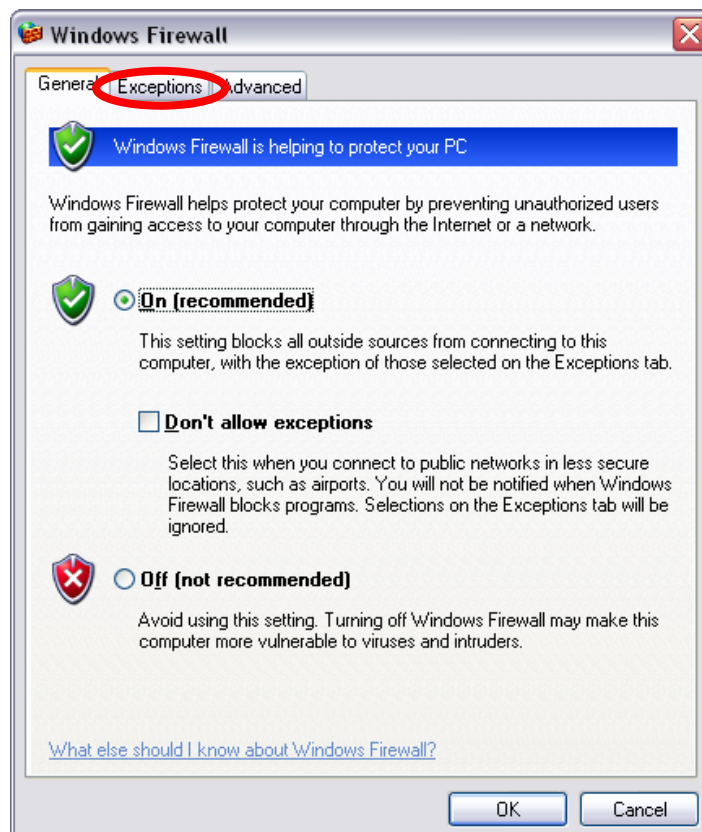
If you can't find the IP Camera in the My Network Place or you have seen the following message when you double click the IP Camera. You have to check if UPnP function is blocked by the firewall. Please follow the steps below to enable it.



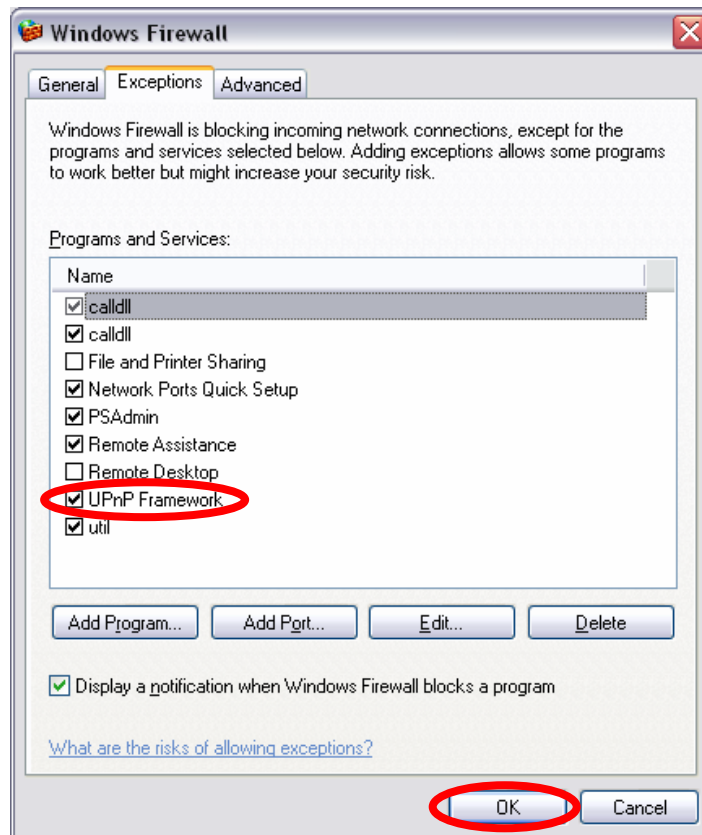
1. Go to "Start\Settings\Network Connections".
2. Right click the "Local Area Connection" and select "Properties".
3. In the "Local Area Connection Properties", select "Advanced" option menu and click "Settings".



4. The "Windows Firewall" screen will be popped up, select "Exceptions" option menu.



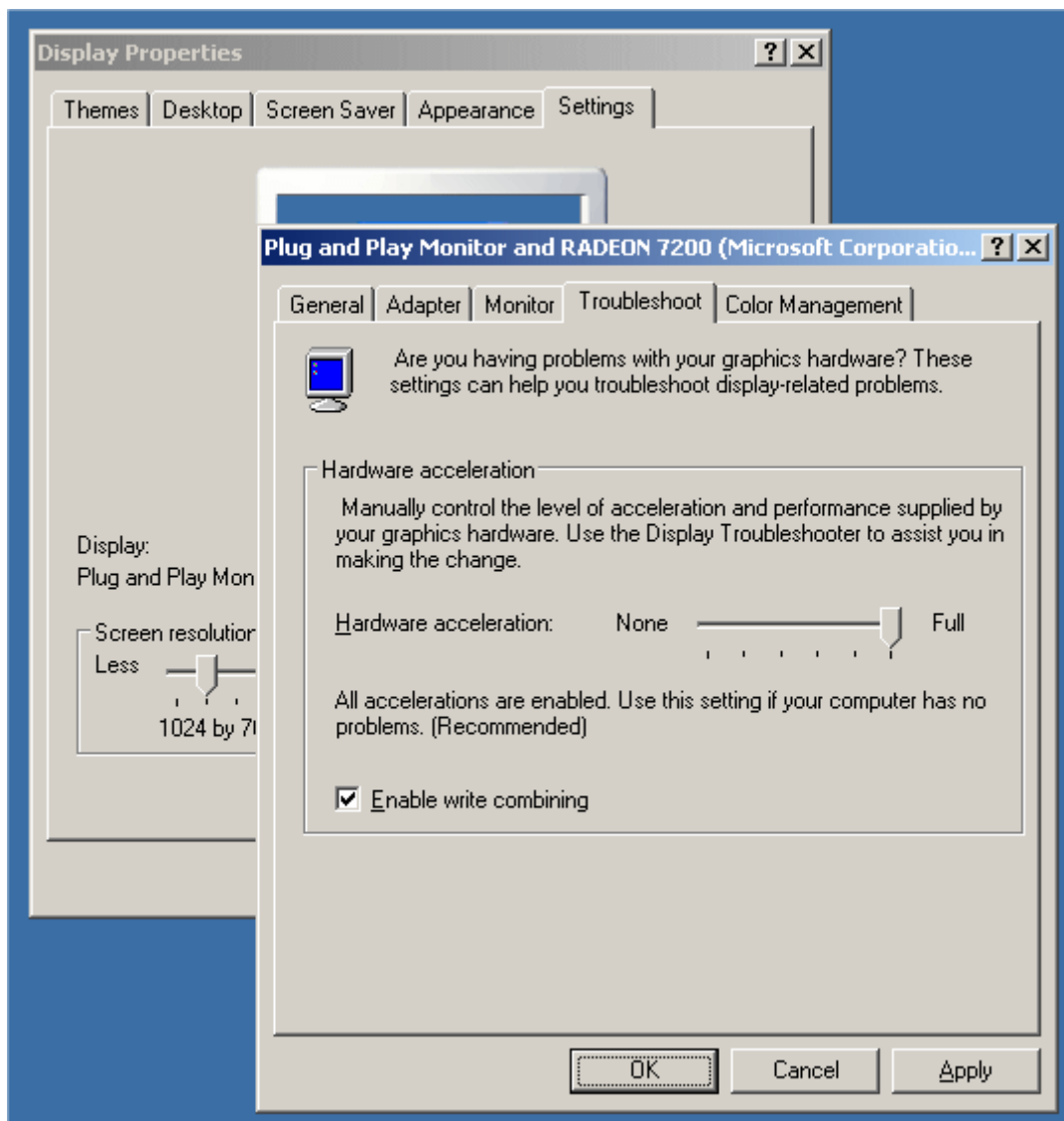
5. Enable “UPnP Framework” from the “Programs and Services list” and click “Ok”.



12. Appendix D Configure Windows 2003 Server

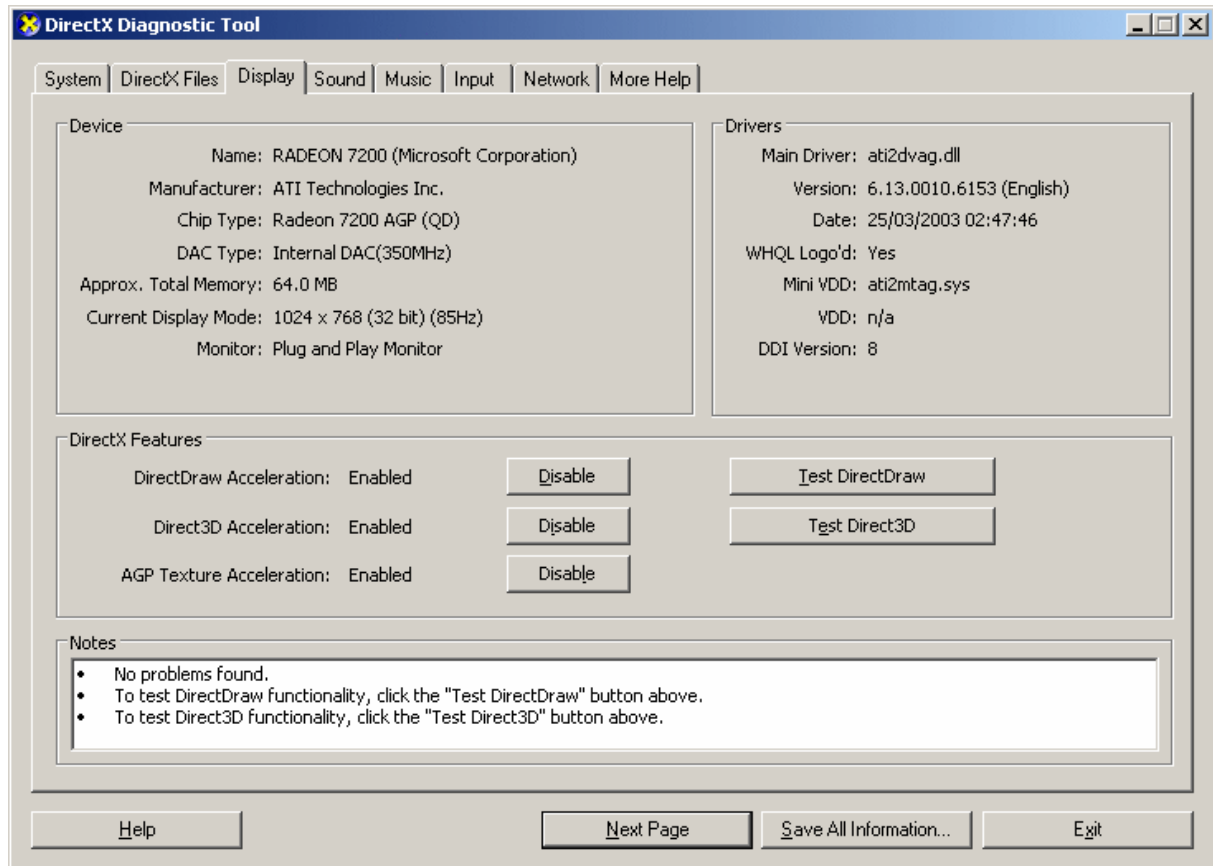
Graphics Hardware Acceleration and DirectX are disabled by default on a Server configuration to ensure maximum stability and uptime. But for any reason you need to enable them to use DirectX enabled applications this section will guide you through on how you can do it.

Enabling Graphics Hardware Acceleration



1. Simply right click anywhere on your desktop and select Properties -> Settings tab -> Advanced -> and finally, the Troubleshoot tab.
2. Now move the Hardware acceleration slider across to Full
3. Click OK
4. You may experience a monitor black out for a few seconds, this is normal.

Enabling DirectX



5. Click on Start -> Run -> and type dxdiag followed by enter. You will get a dialog box asking if you want to allow dxdiag to access the internet to check for valid WHQL certificates - click on Yes.
6. Let's click on the Display tab, now click on all three boxes to enable DirectDraw, Direct3D and AGP Texture Acceleration.